ILLUSTRATIONS OF METAL WORK IN BRASS AND COPPER MOSTLY SOUTH INDIAN

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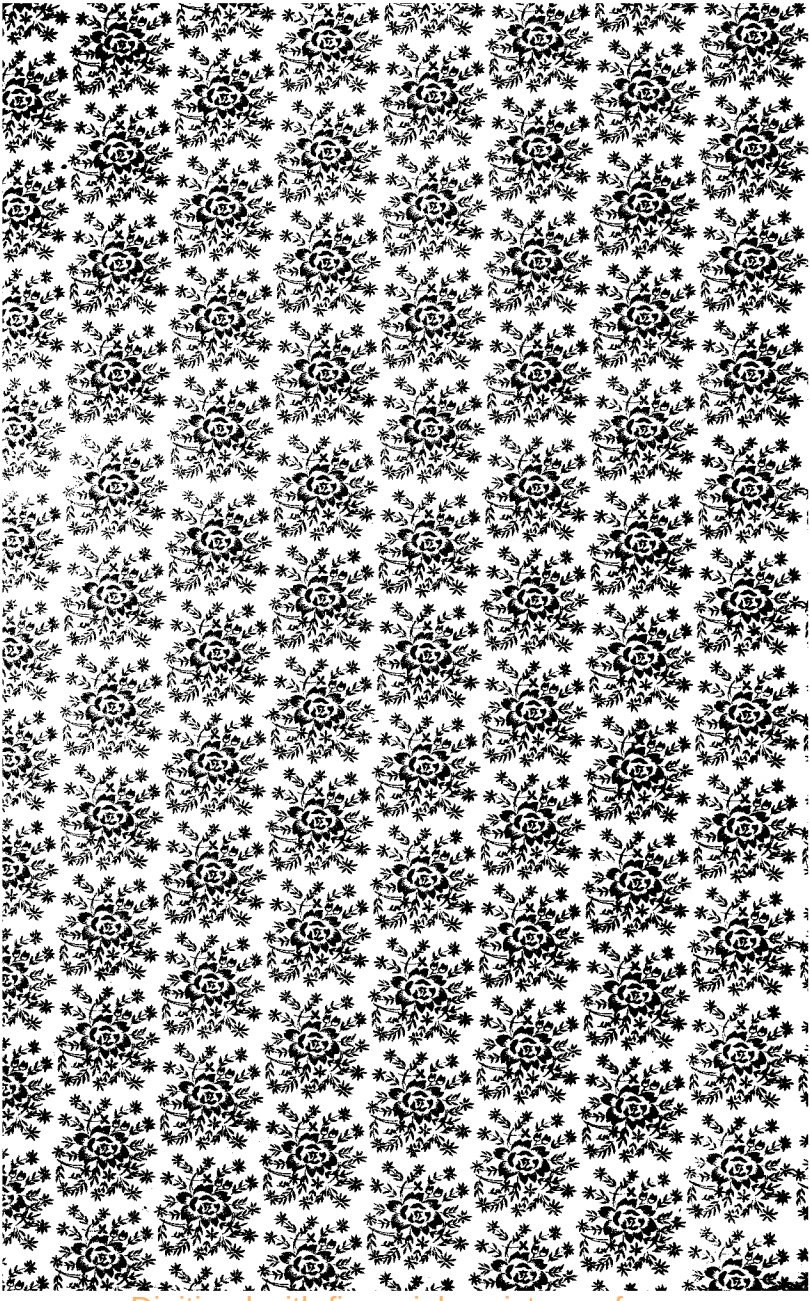

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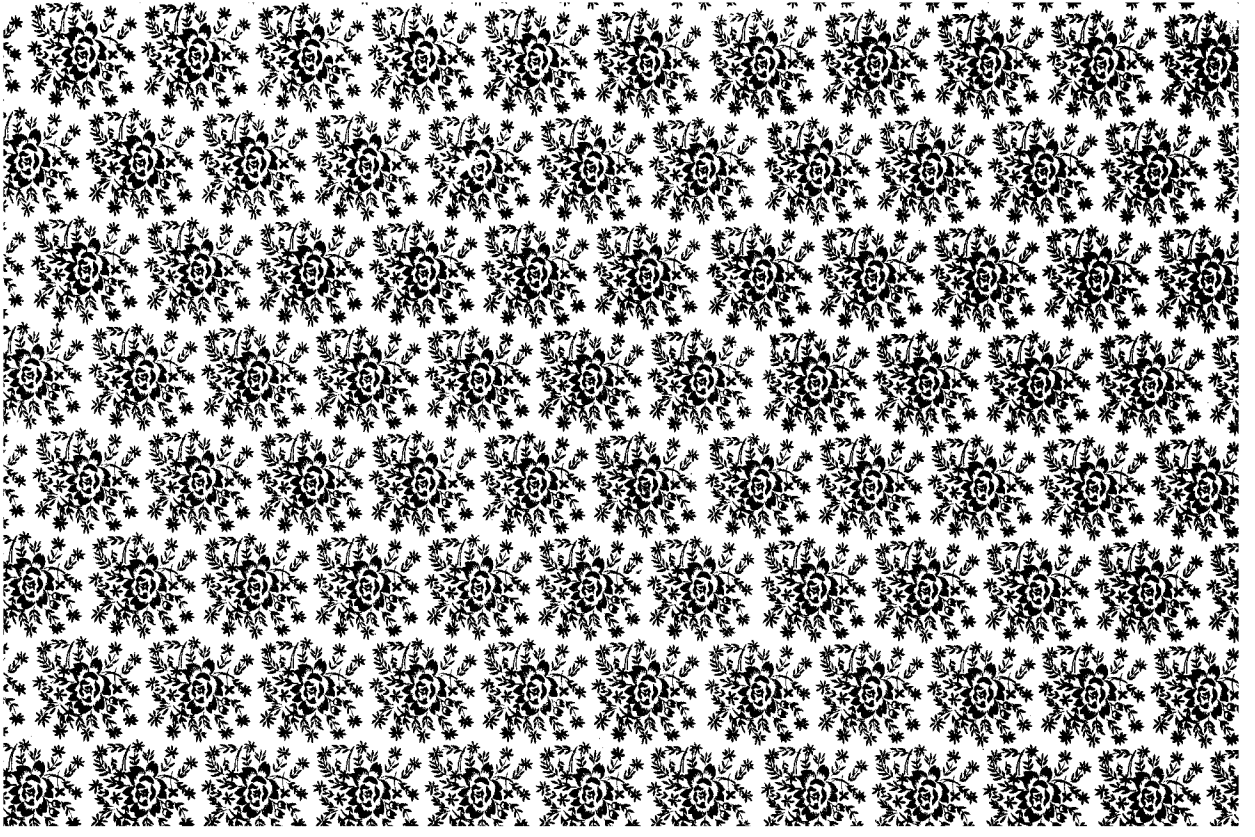

THE ASIATIC SOCIETY OF BOMBAY

ILLUSTRATIONS OF METAL WORK IN BRASS & COPPER

MOSTLY SOUTH INDIAN

From examples selected

BY

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AND
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[*This book of patterns is the outcome of a conference of Principals of the Government Schools of Art held in Calcutta in 1905-1906, at which was considered the Resolutions of the Government of India, Nos. 423—431, dated 29th June 1905, with reference to the proposed authorized pattern books for artisans and others.*]

ILLUSTRATIONS OF METAL WORK IN BRASS AND COPPER.

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THE original idea of this collection of examples of metal work was to preserve in a handy and portable form, patterns of the best of the old pieces still to be found, so that they might be used as a record and source of inspiration to metal workers in the future.

With this end in view, it seemed desirable that the work should be given gratis to as many metal workers in the Presidency who would be likely to benefit by having a permanent record of old forms for their use, as was possible. That being the case, it would also seem but natural that only the very best examples should have been chosen for illustration; but the inevitable question arises, and that, at a very early stage of the proceedings, as to what *is* the best.

With no well-defined standards of excellence, and above all, no well-defined Indian standards for comparison, the task becomes increasingly difficult as one goes on with the work of selection.

We may view South Indian ornamental metal work from so many points of view, the historical, the useful, the typical, the artistic, and each and every new point of view has something to recommend it.

The work of selection was at first entrusted to Mr. Edgar Thurston and M.R.Ry. Velayuda Asari Avargal, and when about half the drawings were finished the present writer undertook to complete the work.

It will be seen, therefore, that the articles were chosen not with the single idea of selecting only the most artistic examples available, but that many pieces have been selected rather because they were historically interesting, or of very typical form, or of consummate workmanship, than that their greatest merit was a purely artistic one. As instances, we may point to figure 113 as historically interesting because it is probably a very early example of that particular form of lamp; to figures 3 and 4 both remarkably typical if not of very superior artistic merit, and to figure 135 which for excellence and care in workmanship, can only be likened to a fine bit of goldsmith's work.

The scope of the work is fairly comprehensive, nearly all the more usual as well as many unique pieces of ornamental metal work are represented, though there are doubtless some inevitable omissions.

As the intention of the book is to be a sort of *vade-mecum* for actual workmen, any extended account of the metal workers themselves would be, perhaps, superfluous; besides which, excellent accounts have already appeared in various journals, notably in the "Journal of Indian Art." Its appeal, therefore, and its usefulness will be confined principally to workmen rather than to collectors or connoisseurs.

Some explanation seems necessary for the inclusion among the illustrations of some 20 articles or so which are obviously not of South Indian manufacture.

These special articles, while they are seldom or never made in the South, are, however, for one reason or another frequently met with in the metal working bazaars and have much to recommend them artistically, as specimens of ornamental work. The form of native vessel, generally called a "lota" in the north, figure 55, is brought south in considerable numbers by pilgrims returning from Benares.

Among the vessels left by pilgrims at the Rameswaram temple are to be found large numbers of this particular form, generally made of a combination of copper and brass which symbolizes the two rivers, the Ganges and the Jumna.

Other fairly common vessels, found in the south but of northern manufacture, are the pots for pouring water for ablutions, figure 74 etc., and the betel or spice boxes of which figures 163, 164 and 165 are good examples. These are used here only by Mussalmans.

Putting aside architecture and the allied arts intimately connected with building, such as stone and wood carving, metal work represents the only other truly indigenous art of Southern India.

In 1891 there were metal workers in 17 districts and 250 towns of the Presidency.

Although the great mass of metal workers are concerned with the making of pots and pans for domestic use, a considerable quantity of ornamental work is also made, mostly for special occasions such as various ceremonies and for gifts at weddings.

The ordinary run of metal worker may be classified as "roughly skilful" and as very few, comparatively, devote their whole time to ornamental or decorated wares it is scarcely to be wondered at that when their attention is turned to more finished work, as ornamental work generally is, that the wearing qualities rather than the artistic ones should be most in evidence.

In all the essentials of fashioning any article, it would be difficult to find superiors to these workmen in any other country: but in the matter of artistic finish and delicacy of workmanship there is often very much to be desired.

It is not so much the inability of the metal worker to finish well, as the custom of the craft and the wages they are ordinarily paid. The one precludes their working in inferior metals with the same degree of care that they associate with working in silver and gold, and the other would make a living impossible, were they to spend very much time on the little things which go to make the differences between ordinary works and genuine works of art.

With all the processes in common use for decorating metal work, with the sole exceptions of enamelling and niello, they are familiar, inlaying or incrusting, chasing and repousse work, hammered work, engraving and casting are all represented in the examples illustrated.

The present work takes into consideration only articles which are in some degree ornamental and so the character of the ornament applied is an important point to be considered.

Generally speaking, its most striking characteristic is that it lacks restraint. There is no feeling, except in a very few instances, of the value of plain undecorated spaces contrasted with ornamentally worked parts.

The ornament is in nearly all cases applied with a proper feeling and understanding of the surfaces treated; mouldings are very well understood and when decorated are done so with a proper comprehension of their sections and outlines; metal work mouldings should have, and do have, in nearly all Indian work the true metal character.

With wood, which is more or less brittle and easily chipped, a fine sharp moulding is decidedly out of place, especially on work which is in constant use and subject to considerable wear.

With stone work the case is somewhat the same, though the Indian workman is clever enough to generally place his more delicate stone mouldings in places not subject to abrasion or much wear.

Metal, however, on account of its toughness is capable of receiving and retaining the most delicate knife like edges in its mouldings, and this allows of a sharpness in modelling wholly admirable and forming an excellent contrast with the smooth, rounded and shining polished surfaces as may be seen in such examples as the lamps figures 127, 130, 136, 137 etc. These forms, to mention but a very few, are admirably adapted to the special material and would be quite out of place and useless in, for example, wood or stone.

There is little if any feeling in Indian work, so common in the great mass of late mediaeval European metal work, that work in brass or bronze is architecture in miniature. In fact, in common with other oriental workmen, the Indian metal worker, if left to himself, uses his metal, whether it be cast in the solid or shaped from sheets, in exactly the proper metal-working way.

He does not confuse it in his mind with stone, or wood, or any other material whatever.

In summing up the general characteristics of Indian ornamental metal work, the two things most in evidence are the perfect understanding by the workman of his material and his almost absolute lack of restraint in the use of ornament, doubtless, to some extent, one is the outcome of the other.

With highly skilled craftsmen, especially those who have not had much training in the artistic side of their work, the tendency is always toward the *tour de force*.

This feeling is apparent in other than metal work all through India and can partly be accounted for by the comparatively easy means of existence and the eastern lack of haste and counting time as of little value.

The excessive amount of carving in hard gneisses and granites, so conspicuous in many South Indian temples is another common instance of the tremendous amount of work which is lavished on raw material of no great intrinsic value.

Ornament we may regard as one of the luxuries of existence.

It has no greater usefulness than to beautify the object on which it is placed, though of course, in its best form, it becomes almost an integral part of the object or utensil on which it is used.

But many persons are apt to regard a finely formed though quite unornamented object, as, for instance, a beautifully-modelled pot or vessel as beautiful and ornamental in itself, forgetting that, though it may have beauty of form, or line, or colour, it is only *ornamental* when it is used in an ornamental manner. It thus often happens that a person of good taste will select a perfectly plain object of beautiful form rather than an object of inferior form, no matter how fine the ornament on it may be.

Now, if we consider the general run of Indian houses we may be able to get at the artistic reason for what seems to so many Europeans the over ornamentation of much Indian metal work.

The house of the average Indian is practically devoid of furniture. If the occupants live strictly in the Indian manner they need neither chairs, tables, cabinets or any of the hundred and one articles of "furniture", which are deemed essential to the westerner.

The walls of his house are plain and undecorated, and if, with this background, he brings into it for special occasions wonderfully worked lamps, chembus, caskets and trays no matter to what extent they are ornamented, they are nevertheless not necessarily overornamented.

How different is the case when some wonderful bit of Indian workmanship is placed in a house furnished in the European manner and already filled to overflowing with every sort of decorated ware from the four quarters of the earth.

This is perhaps a degression, but it seems important to point out that the commonly levelled criticism of overornamentation of Indian wares, is really without any sound foundation when we consider the genuine uses to which the articles are intended to be put.

Again, when we consider the relative beauties of ornamental forms, it is well to bear in mind that among certain peoples a large ring inserted in the upper lip, blackened teeth, or tatooed mustaches are all considered beautiful, and to measure another peoples' ideas of ornament and beauty in our own small baskets is hardly fair.

Even nowadays many westerners look upon a silver tea pot or salt cellar in the form of a Roman cinerary urn to be the *ne plus ultra* of desirability in form, in such utensils.

Form and ornament are so closely allied, that it is often difficult to separate the two in one's mind, but one may do so by first considering the use, and manner of use, to which an article is put and then to reason as to whether or not the ornament interferes with the use of the article.

Let us take as an example, the lamp No. 114 and the similar 7 or 8 following ones. The only essential for pure usefulness is the pan to hold the oil and the V-shaped extension which keeps the loose wick in place.

It may be an added convenience to have some sort of upright extension of the back to grasp the lamp by, and this piece may also act to a slight degree as a reflector, but this is not an essential, as it is not a lamp intended to be carried, but to be placed in a niche in the wall.

Therefore, almost any ornament, which confines itself to the back and the sides of the pan and does not interfere with the light can be justified, though apart from its beauty, it has no usefulness whatever.

Of the standing lamps Nos. 129, etc., the essentials are a pan at the base to catch any drippings, and generally made heavy for purposes of stability; an upright rod to raise the light pan to a suitable height and the light pan at the top for the required number of wicks. If any of these lamps are analyzed, so to speak, or, for that matter, almost any of the numerous illustrations, it will be found that in practically every case, the utensil or article has first been considered from the point of view of its usefulness and that the decoration or ornament never interferes with that use, in even a small degree.

That, we will find, is almost as good and severe a test as one can apply to any sort of ornamental article intended for a distinct use.

The forms of the common utensils of every day use is a study full of interest.

Practically all the more simple small vessels used for liquids can be easily traced to natural forms such as the various gourds and cup-shaped flowers, and the persistency with which these simple shapes continue in use with few, if any, convenient improvements, certainly points to a very great conservativeness in the Indian people.

One may find, occasionally, an ordinary chembu with the addition of a handle and lip which converts it at once into a very convenient and useful water jug according to western ideas, but this is by no means common.

Even the large vessels used for carrying water, such as the kudam figure 51, are invariably without handles and this form, convenient enough for carrying on the hip, is by no means easy to lift when filled, by the usual grasping of the rim in lieu of a handle.

Virtues these pots certainly have, both artistic and utilitarian; they are nearly always of a pleasing form and are easily cleaned and have no added parts to become lost or to get out of order.

Then too, if we examine the other usual Hindu household vessels, we find them generally of a severe plainness, but eminently suitable for their various uses. The kudam, already mentioned, is used for carrying water from the well, this has a comparatively narrow neck to prevent spilling, another similar large vessel called a "tondi" used for actually lifting the water from the well, has a much wider mouth, the chembu, the general name applied in the south to the smaller gourd-shaped vessels, varies in the width of the mouth according to the purpose for which it is intended, figures 47, 48, 49, 51, 53, 54 etc., examples, and there is generally a name for each variation in form. Again, such vessels as those shewn in figures 55, 57, 59 etc., are eminently suited to their purpose, either for carrying liquids a long distance, as the small mouth makes them capable of being easily sealed, in a land where corks and covers are seldom used, or as drinking vessels, when one remembers, that the Hindu usually pours the liquid into his mouth without the lips touching the vessel itself.

The large vessels used for storing water such as the "tavalai" and the "anda" are of excellent forms, though seldom decorated, and the cooking vessels though invariably without handles of any sort are constructed with skill and foresight, for they are all capable of being easily cleaned both inside and out, and their openings vary in size according to the particular use to which they are put, those in which the heat is to be concentrated and kept in, narrowing toward the top and with wide or curving bases toward the fire.

How sensibly constructed these common vessels are, for the usual Hindu cookery, which is practically all done over a small open fire, one has but to watch a skilful cook at work, to prove. But what appears to the European at first sight, or casually, as perhaps both curious, unusual and inconvenient has often only to be seen in actual use to convince him of its eminent suitability to its own special purpose.

Particularly interesting to the designer and the archaeologist is a comparison of Eastern and Western forms of common utensils.

It is perhaps not a study which is of vast importance, but it certainly points to a very early and extended intercourse between the East and West and leaves much room for speculation as to the origin of a very great variety of forms. In the very early days of trade between East and West history records the fact that brass vessels were exported from what is now Bombay to Egypt as early as the 6th century, but later, the probability is that forms of vessels were more commonly copied in India from European models than that Indian models were much used in the West.

One must of course, take into consideration the fact that the Hindu has, from time immemorial, been in the habit of having his brass and copper vessels melted down and refashioned at frequent intervals and this practice has doubtless led to a great many old forms having been lost, but the old records of trade between East and West shew that it was almost wholly the natural raw products of India which were exported in exchange for western gold.

Abdul-er-Razzak (1442) has written, they brought "hither those rare and beautiful articles which the sun, the moon and the rains have combined to bring into perfection".

It was not until comparatively modern times that Indian manufactured articles were exported in any quantities to Europe. In the absence of Indian forms well authenticated as to date one can only reason that the European forms of many articles of known date were earlier than the Indian and that the Indian were borrowed or adapted from them.

The common ghee spoon is the duplicate of a very early Egyptian form. Very many of the forms of commonly used cooking utensils can be found in old Greek, Roman and Etruscan pottery and coming to later times, the south of Europe, Portugal, Spain and Italy, especially, has supplied the Indian craftsmen with a goodly number of models.

One often hears it said that Indian workmen are inveterate copyists, but it would be nearer the truth to say that they are clever adapters. A reason for the survival of old forms which were once common in European countries and which have been superseded, is that the Indian lives much more simply than his western brother.

In many respects, the present day civilization of India in so far as it concerns material things and the adoption of "modern conveniences" is only comparable to the mediaeval civilization of Europe, hence, in their household and other utensils, what European people might consider old-fashioned and inconvenient forms, still persist.

As other instances of similarity between western and eastern forms mention might be made of the shallow bowl with a slightly incurving rim, used in cookery.

This form, which was common in very early times in Egypt, again appears among Roman remains in various parts of Europe, and it is to-day a bowl in common use, made of wood, in Swedan.

The cup in which a figure stands, and which empties through the stem when liquid is poured into it, to a certain height, is a common European arrangement, a well-known example being the "Swan" mazer, belonging to Corpus Chirsti College, Cambridge.

The chain fastening of the lid of the boxes figures 164 and 165 used in place of hinges may be found in a somewhat similarly shaped silver box of the 5th century, of Roman make, now in the British Museum.

The common hollow spherical bells used as collars for cattle are found in very early times in many parts of Europe as well as among Aztec remains in America. In fact, although superficially the differences in form between European and Indian vessels and utensils may seem pronounced, the frequent occurrence of similar forms become apparent directly one begins to study the subject seriously.

Occasionally there are instances of old Indian forms being adapted to European uses, as in the caudle cups of the 16th century and earlier, which evolved from a small wide-mouthed chembu, to which was added a pair of handles, and in one particular form of rose-water basin often found in the Latin countries of Europe and which is nothing more than a slightly elaborated beggar's bowl of the type shown in figure 93.

Most Indian decorated work has a uniformity of size in the motive used, which makes it a simpler matter ornamentally, to design the whole thing in keeping, one part with another.

The question of "Scale" does not often occur, as in so much European work, and in dealing with only one scale instead of with 2 or 3 it is apt to lead to a certain monotony, which, however, is not without its ornamental uses.

Keeping all the ornamental details more or less to one size, as the Indian workman almost invariably does, and distributing his ornament evenly, he gets thereby a richness, which gives his work a distinct cachet.

Each of the illustrations has a short description attached, so that any particular descriptive notice in this preliminary note would be redundant, but some of the general forms may be explained where such a course seems necessary.

The vessels used for puja, figures 43, 44 and 45, are merely the form of chembu as seen in figures 49 and 58 with an excessive amount of decoration around the sides, and with the Saivite emblems of the bull (nandi) and lingam on the rim. These are always of brass. Figure 52 which is the same form of chembu with the addition of a spout is also used for puja purposes, but is invariably made of copper, it is called "sthali". The common forms of cooking vessels are occasionally decorated when used in special ceremonies and such a vessel is probably that shown in figure 56. The form of figure 67, though now commonly used by Hindus, is probably borrowed from a china or earthenware vessel of Mussalman origin.

The following two figures are the common forms of wash-hand basin used by Mussalmans, the top part saucer shaped, and with a perforated cover through which the water trickles into the lower part of the vessel. They are usually accompanied by a water pot of the general form of figure 74. Though not uncommon in the south, the examples met with bear evidences of northern origin and are to be found commonly in the metal bazaars in the Punjab. What appeared to be a curious instance of a northern form made in the south is the figure 70. This is unmistakably Nepalese and it was interesting to try to trace the connection between the two so widely separated countries bearing in mind the similarity between the architecture of Canara and Nepal pointed out by Ferguson, until the romance was dispelled, by accidentally ascertaining that the identical jug in question was a direct and quite recent copy from a genuine Nepalese example, made by a Malabar workman at the instance of a civilian friend.

The copper begger's bowls, now alas, generally supplanted by a half portion of a red painted, Dutch cheese tin, is one of the most beautiful of all the South Indian Vessels. There are two common forms, both beautiful, one, figure 92 has gadrooned sides resembling the sections of a melon and the other, figure 93, is an open saucer shaped dish also with gadrooning.

This latter form is quite commonly found in continental silver work of the 16th and 17th centuries and is a favourite Portuguese form of basin, generally accompanied by a ewer for rose water.

Figure 94 is a very close copy of a double goured with two sections cut from the rhind to form and leave a handle; actual gourds of this shape may still be seen, occasionally, carried by wandering mendicants. The form in metal, though sometimes found in the southern bazaars is commonly made only in the north.

Few examples of secular sculpture are found in South India, but the small figures of soldiers, Nos. 95 to 101, though almost bordering on caricature, are, nevertheless faithful representations of the costumes of the military, in the 18th century.

They must not be confused in any way with the common brass toys of the country, which are nearly always of inferior and rude workmanship, even though sometimes quite full of life and action.

The toys illustrated are of the more uncommon patterns, a figure on a horse or an elephant is the usual thing, and the treatment of the horse and rider frequently remind one of the old French and Italian brass acqumaniles or of the even older Spanish metal toys on wheels.

Much elaborate workmanship is lavished on the various forms of cressets and incense burners, such as that shewn in Figure 106 and the following three figures. They are a great addition to the picturesqueness of car festivals, and those who carry them take great pride in the fact.

Figure 110 is a common enough form of lamp in Nepal and Tibet but is not often found in the south.

In principle it is the same as figure 125, that is, a large reservoir for some quantity of oil, which is burned in the small shallow lamp pan in front.

The great variety of ornamental lamps in use in the south are well illustrated in the two score or more drawings beginning with figure 112.

Many of the more elaborate forms are only to be seen in use on special occasions or in temples. The larger ones, particularly standing lamp of good weight, are frequent articles included in marriage dowrys.

Although the large numbers shewn are of various forms and types, they by no means exhaust the list. The female figure holding a lamp pan of which 112 is a good example are often kept burning in private houses as memorials for the dead.

Those of the forms shewn from 114 to 122 are placed in the triangular niches always found in the walls, generally both outside and inside of Hindu houses.

No. 125 is the sort commonly carried about by attendants in temples and the upright standing lamps, figures 127-129, etc., many of which are so happy in proportion, and decorated in such excellent taste are to be found everywhere. The number of wicks varies from four, which is generally the minimum, to as many as two hundred or more in very elaborate examples such as figure 127.

A very good and typical example of the simple ones is figure 134.

A form usually used by Mussalmans is that shewn in figure 140. The essential difference being that there is no projection upward, beyond the pan for the wicks.

A very fine example of an adaptation of Eastern work to more or less European use and fashion is the elaborate sconce, figure 138.

This follows the same manner of working as the common large "Vellore" brass trays, that is, the pattern is outlined and parts of the background are pierced. It is unusual to find so good an instance of intelligent adaptation. A great host of small lamps of sorts is to be found in use for purposes of worship. Some are used for camphor burning and some for oil or ghee, a convenient way to ascertain the difference between the two being the shape of the burning pan. Those which are pointed at one end are intended for a wick placed in ghee or oil and the plain circular concave pans are used for camphor burning.

There is often a handle attached as in figures 144 and 146.

Of boxes and caskets in metal for preserving betel leaves or spices, or for jewels, there is an immense variety.

None of those illustrated call for special mention except figures 155 and 156. The first of these, figure 155, is undoubtedly the most important piece of cast metal work, excepting sculpture, in the Government Museum.

Its age is uncertain. The comparative crudity of the modelling and the very corroded state of the metal might easily lead one to believe that it dated from very early times, but these details are so uncertain as guides in a country where burried metal corrodes so easily and where workmen *still produce* plenty of work quite as primitive in technique, that one may not safely ascribe to it, a date earlier than the 17th century.

It was a treasure chest and contained jewels belonging to some temple.

Figure 156 is a form only commonly made in Malabar.

Taking into account the fact of the early intercourse between the Portuguese and the people of the Malabar coast, one must come to the conclusion that this form is adapted from some ancient European pyx or reliquary, as the peculiar form of lid

resembling the steep roof of a building was a common form in European countries from about the 9th century.

There is, to be sure, perhaps an even greater resemblance, especially in the proportion of the sides to the lid, to the common Malabar hut, but it is unlikely that the form originated as a copy of a building in miniature, in Malabar, for it is far too elaborate in its metal construction, and put together in a way most unusual in any other Indian metal work.

In fact, it is a "fitter's" box altogether, and the Indian metal worker consistently avoids any but the simplest fitting in work of a purely indigenous origin.

The ornamental arecanut cutters, figures 173 to 177, give scope for a considerable degree of fancy in their patterns.

They are often elaborately finished and amusing and ingenious in design.

A few of the northern forms of metal work, such as the spice boxes, figures 163 to 165, and the hooka bases, figures 181 and 182, have been included as specimens of excellent pattern and workmanship, as mentioned above; these forms are seldom manufactured in the south, though of fairly frequent occurrence as old or second-hand metal work in the bazaars.

"By one of the splendid ironies of inert things, man cannot bring his machines to perform certain crafts upon fabrics, woods and metals even in his direst need, but must coax them and mould them with his hands.

"In the earlier stages, man worked out in his primitive way and developed crude methods of success with various materials he found at hand and this was the one and only principle by which the desired end could be achieved.

"Few of these inelastic arts have, however, been able to withstand the new submission of modern machinery and mechanical methods, but some there are, and these bid fair to continue stubborn to the end. They remain to all intents and purposes precisely where those crude old forbears of mechanical evolution dropped the mwhen their age was closing down". "Almost anything conceivable can be done with copper so long as it is coaxed". Hammered metal work is "an ancient craft unaltered by ages of impatience".

The passages just quoted, from a modern author, express admirably the point of view of the artist craftsman when he has to deal with metals as a material with which to express his ideas.

Machinery has done much to further our material well-being and bodily comfort, but it has never yet produced a finished work of art. We cannot deny that, in the *preparation* of material whether in wood, stone, metal or almost any other raw product, its uses are infinite, but in those subtler crafts which seek to express some part of an individual, it has no place.

There is nothing to take the place of the hundreds of thousands of gentle tops of the hammer, skilfully manipulated, which go to the fashioning of a fine piece of hammered metal work. Cellini, in his wonderful gold and silver figures made for King Francis, which he describes so admirably in his books, worked his metal by the same process that is still now commonly used in making the large vaghanams which are found in the great temples at Kumbakonam, Conjeeveram, Madura, Rameswaram and many other places.

There is no quick and royal road to success in such work. It is a matter of infinite patience and "coaxing".

We may strip and torture our sheet metal by spinning, or by stamping, and delude ourselves into the belief that we are "improving" our methods, but the fact that the product got by such means is but a caricature of the real article, wearing only half as long, or even less, still remains.

Nothing could better express the inefficiency of the machine and its products, than to compare them with such supreme technical achievements as is represented by a varied collection of *Indian* metal work.

Among the finest examples, one can easily select pieces which are comparable with any metal work ever produced, and with the cast work this is particularly true.

The cire perdu process which is commonly, it might be said, almost universally used for either simple or intricate work, in India, usually produces, when manipulated in Western countries, a spongy and unsound casting almost impossible to work upon successfully and finish properly.

The Indian workman, however, with his casing of rather porous earth and his perfect understanding of vent holes, seldom fails to obtain a sound and thoroughly workable casting. In the west, when this process is used the object is to obtain a casting which requires as little finishing as possible, but it is always at the expense of the soundness of the whole mass, for to retain the delicacy of the original wax model so fine an earth must be used that it allows of no general ventilation of the mould.

The Indian workman on the contrary, by his use of a coarser and more porous covering for his wax model, gets a thoroughly sound casting, which to him is but the roughing out, so to say, of his finished work.

This finishing, which the European hopes to avoid (but always at the expense of soundness in the casting) by the cire perdu process, is, in India, taken as a matter of course. Casting by this process known as "cire perdu" or "waste wax" process has been described so many times that it seems futile to attempt it again. But for a proper understanding of the work in hand, a short description may not be out of place here, particularly as it is well to point out the difference between this process and the common "piece mould" process generally employed in western countries.

In "Piece moulding" the pattern, which may be of wood or metal or other material, can be used many times, for the mould into which the moulten metal is run is in sections or pieces built up of moulding sand closely packed into a retaining receptacle.

The simpler moulding boxes are in two parts, hinged, and the pattern, if fairly simple and symmetrical, is divided by an imaginary line through the centre and half of it comes into each half of the moulding box.

One half is moulded in one part of the box, the other section of the box is closed, and the second half moulded; the moulding box is then opened and the pattern taken out to be used again, if necessary.

The channels for the ventilation of the mould and for pouring in the moulten metal are made, the two halves of the box are closed together, and the mould is ready for use. In the "cire perdu" process, a wax model is made for *each* casting, attached to which are wax rods for vent holes and this model is covered by successive coatings of a mixture of earth and sand with some organic matter until a sufficient thickness is obtained. This mould, containing the wax model, is then allowed to thoroughly dry and is finally placed in the fire upside down and the heat both melts the wax and allows it to run out, and at the same time bakes the mould, converting it into a species of terra cotta. In this state, and when the mould is still hot, moulten metal is run in, filling the place previously occupied by the wax.

One will realize from this, one reason why one piece of Indian metal work is so seldom like another in all particulars, for with each separate casting, a new model must be made.

The common use of this process also explains to a certain extent the intricacy and ornate invention so frequently found in Indian work, for the difficulties of making a mould which does not require to be removed from the pattern while in process of making and requires no elaborate and careful fitting of parts permits of infinitely more elaborate work being undertaken, more or less easily, than is often desirable or possible, in piece moulding.

In fact, in elaborate piece moulding, such, for instance, as a naturalistic group of figures, the making of the mould frequently occupies a skilled moulder for weeks or months.

Man does not preserve an ancient art or process in reverence for its age, and among the first experiences of the present writer on coming to India, were various requests to be taught the western methods of casting metal.

Little does the Indian workman realize the infinite superiority of his own traditional methods both artistically and in every other way (save in a few cases where speed is desirable) over the common "improved" western methods of which he is so fortunately ignorant.

The attendant evils consequent on speed in outturn, the "industrial sin" as it has been called, of over-production has so far not made any serious difference to Indian economics, but what the future may bring forth if such vicious processes as spinning and stamping of metal work are brought into common use one cannot contemplate with any degree of equanimity.

In a paragraph above there was mention made of the similarity of method employed in both the east and west in metal working.

We may find, occasionally, slight differences of manipulation, but in methods and even in the tools used, the essential points are identical.

A somewhat curious point is in the manipulation of a sheet of metal which is being hammered into, say, a chembu, or some form in which there is a decided drawing in or narrowing of a neck or other part.

The Indian workman holds and hammers his metal in a manner which to the European seems back handed, that is, the part of the object nearest him would be the part held away by the European workman and the strokes of his hammer would be toward him instead of away from him.

The result produced is the same, but the Indian gains in one way over the European, for he invariably uses his feet to help him steady the metal on the stake.

He can thereby bring his sheet into the required form in a fewer number of "courses" than the westerner, and were he capable, physically, of working for as many hours in the day would prove a more efficient workman at hammered work as he undoubtedly is already at cast work.

The lathe is used to a great extent in *finishing* hammered work in India, but outside of some few large manufacturing concerns conducted more or less on European lines, it is not in use commonly among native artisans for spinning.

That this state of affairs may continue is very much to be desired, for there is probably no metal working process of which so little can be said in its favour (excepting the questionable one of speed in outturn) as spinning.

Stamping has its uses, artistic as well as otherwise, but as a commonly used process in Europe it deals with the flimsiest and most tawdry productions of the metal worker's art.

The Indian workman, on the contrary, when he resorts to stamping, uses it merely as a rough preliminary process to be finished and put in shape by handwork afterward.

But even so, except where there are large quantities of similar ornamental details to be made, there is nothing much to be gained by working in this manner, except speed.

The hateful "Swami" work of Tanjore, a modern phase of a once beautiful art, is an instance of the uninteresting product got by this questionable process, even though in this case, the rough details from the dies are finished afterward by handwork.

Two processes of decorating one metal with another and which if not completely unknown in Europe, are at any rate very rare, are the processes known as "Bidar" or "Bidri" or "Koft" work and the incrusted work of Tanjore and Tirupati.

Of the first, "Koft" work, as this is generally of silver applied either as wire or thin sheets on to blackened iron, there are no examples here illustrated, as the scope of this work does not include articles of iron.

The process, however, is sufficiently interesting to describe, because it is so often mistaken for damascening.

The surface of the iron is crossed by slanting strokes of sharp chisel which produce a roughened surface not unlike that of a file.

There are sufficient sharp points to catch and hold soft silver sheet or wire, when this is hammered on to the iron, and the hammering produces a smooth finished surface. With damascening, the applied metal, which is of greater thickness than for "Koft" work, is *inlaid* into previously-excavated shapes which have been slightly undercut on their edges.

One is an inlaying process, the other applique or overlaid. The Tirupati and Tanjore work (a fine specimen of which is illustrated in figure 51) is also an over laying

process, but in this case the metal is merely fastened at its edges, by an undercut outline which is afterward hammered over the edges of the applied metal and so holds it in place securely, just as a precious stone is held in place by a "burnished" setting.

Between the old Tanjore work (as seen in figure 51) and the Tirupati work, a good specimen of which could not be found for illustration, there is practically little difference in process. Both use a base of brass or copper on which silver and copper or silver and brass or one of these metals alone is applied.

The finished article also, in both cases, was smooth, *not* with the ornament in relief, which is the bane of modern Tanjore work.

Old Tanjore work was rather more covered with ornament than that of Tirupati, and the latter work generally had some considerable plain spaces of the metal base shewing, and the decorative details were generally made up of a representation of a deity with other figures, a picture, in fact, instead of purely ornamental motifs as in the former work.

Still another process, this of cast work, not hammered as in the work just mentioned, is the casting in two metals, brass on to copper which is also sometimes spoken of as "Tirupati" work.

Again, the centres where the work is now to be found, though only very occasionally, if at all, are Tanjore and Tirupati.

In describing some of the illustrations, this process is given in more detail, so a slight mention of it only is necessary here.

So far as can be ascertained, it is not at present practised, and it is said to be an art unknown except in Southern India.

There is no secret about it, it is made easily possible by the "cire perdu" process, and consists in casting the ornamental parts of a figure, such as the clothing and jewels in brass, over a core of copper, the copper representing the flesh parts only.*

When one observes the ordinary spelter which is commonly used for soldering copper, and the very close union of it with the copper, it is no longer a mystery that the two metals are so securely attached.

The process was investigated by Professor Church many years ago and accurately described in the Journal of the Society of Arts, although Professor Church had not had the opportunity of actually seeing the process worked.

A large literature has accumulated on the subject of alloys, but we may generally classify them, as used in South India, as either copper, brass or bell-metal.

Images of most deities, according to the sastras, should be made of copper, but as copper is almost impossible to cast in its pure state, a small proportion of tin or brass is added to insure its easy running when in the moulten state.

South Indian images are frequently referred to as bronze, but, as bronze is a mixture of 80 or 90 per cent, only of copper with tin or other metal, it is more accurate to speak of most of these images as of *copper* rather than of bronze.

It is possible that originally there may have been definite proportions of copper and zinc or copper and tin prescribed among Indian workmen to form the two alloys known as brass and bell-metal, but the Hindu custom of so frequently remelting their household utensils, and the workman's lack of care in proportioning the various metals, has had the same result here as in most other countries.

There are now an infinite variety of brasses of different proportions of ingredients, and about the only way to distinguish between brass and bell-metal, unless we may analyze them, is by their colour.

It would be difficult to find two specimens, except those cast from the same pot of metal, that contained identically proportionate quantities of the metals making up the alloy.

It is only very seldom that pure copper and pure tin or zinc is freshly mixed nowadays in India to produce the alloy required.

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* The process may be reversed and the brass parts first cast. In practice, the metal which predominates is cast first by some workmen.

In European countries, if scrap metal is used, it is most carefully proportioned, and there are some score or more or different proportions of the original metals used in alloys, commonly, for special purposes.

Many are the complaints heard from educated Hindu peoples concerning the inferior quality of the alloys now in use, especially for domestic utensils.

In the descriptions of the illustrations, the colour of the metal has been the guide used as to its alloy, as it was not considered to be of sufficient importance to justify a separate analysis of each piece.

It is occasionally difficult to distinguish between bell-metal and bronze and bronze and copper, but the difference in colour between brass and bell-metal is so decided as to seldom leave one in doubt.

As an instance of the inaccuracy of nomenclature applied to Eastern metal-work, Professor Church mentions a Burmese bell which he analysed.

There was an inscription on the bell referring to it as of *pure* copper. On analysis it was found to contain 70 per cent. copper; 16 per cent. tin; 12 per cent. lead, and traces of no less than seven other metals.

Nearly all the sheet metal used is now imported, but while the four metals-copper, tin, zinc and lead-are, of course, in the greatest proportion in alloys in native metal, traces of arsenic, antimony, bismuth, iron, nickel, silver and cobalt are frequent.

One somewhat common alloy used for figures of deities is that known as "Pancha-loham" or five metals.

Copper, silver, gold, tin and zinc are the original ingredients though brass (which is an alloy of copper and zinc) is generally mentioned in place of zinc.

Iron is also sometimes mentioned, but this is a mistake, as it would be impossible to melt it at the temperatures at which the other metals fuse.

The quantities of gold and silver are purely nominal, but even so they give a very easily distinguished colour to the composition as a whole, especially when it becomes slightly oxydized.

A few unavoidable omissions may be noticed in concluding this short account of a very extensive subject.

Fine and delicate metal-work such as would come under the head of jewellery is not included because it is a trade quite apart from work in copper and its alloys.

The brass and zinc work of Kurumbulur, near Trichinopoly, though very occasionally good in pattern, is a product probably invented only for the European market, it has never been an extensive industry nor one which has much to recommend it either in usefulness or beauty. Like the making of pith models of temples we can only look upon it as an excrescence to be deplored.

Koft work has already been mentioned as beyond the scope of this work.

Some of the cruder work in brass such as the models of animals produced by the hill tribes of Ganjam and which were first fashioned in threads of wax twisted and interlaced over an earthen core are decidedly quaint and interesting, but more so historically than artistically. As beginnings of the art of metal casting they certainly have an interesting place, and because of their ingenuity are worth a student's attention.

Similarly, the votive figures from Canara, a good collection of which are in the Government Museum, are full of expression and interest.

Indeed, the degree in which these figures do express the ideas intended, even with all their crudity of modelling and finish is one of their most remarkable traits.

It was originally hoped that examples of the great temple vaghanams could be illustrated, for these are, perhaps, the most skilful examples of the use of sheet metal to be found in India. The process, that is, covering a wooden with thin core metal, sometimes of silver, but more usually of copper, plated with silver or gold, is a simple one enough, but the skill consists in the clever shaping and joining of the metal plates. At some of the larger temples, such as Rameswaram, numerous artisans

are given constant employment in this work, and the temple workshop is by no means the least interesting part of the sights to be enjoyed.

One sort of fine copper and brass work, comparable with the very best similar work of other countries, is that which was employed in the enrichment of old arms and armour, particularly the specimens from the armoury at Tanjore. It is most likely that this work was carried on at one time in Tanjore itself, but there is much similar work in steel, which is generally thought to have been made at Sivaganga, in the Madura district. Some of the sword and dagger handles and the curious brass bracelets worn by successful warriors are truly splendid specimens of careful and well-designed work.

No specimens of the modern vulgar Tanjore work of embossed silver, applied to copper or brass vessels, has been included, because it undoubtedly is, as Sir C. Purdon Clarke wrote in 1890, the "very worst and most meretricious Anglo-Indian art manufacture of the country."

Could old specimens of Tanjore work, made generally of copper, applied, *flat* without any embossing, be still found, it would have been a great gain to have illustrated them. The only example available was the fine Kudam, figure 51. Of the somewhat similar work of Tirupati, not even one good example was procurable when the drawings, were being made.

Historically, and occasionally artistically, interesting examples of old grants of land, cast in copper are seen, and it seems a pity that this method of recording important transactions is no longer in use.

These are not, however of great enough artistic value, generally, to be included.

Some curious examples of gilded copper in large pieces and of quite primitive workmanship are the collection of plates from Srisailam, Kurnool district, recently acquired by the Government Museum.

One of these plates, particularly, is so curiously wrought, with a figure partly in the round coming away from the back-ground, as to be almost, if not quite, unique.

They should be closely studied by any person interested in the development of metal-work in Southern India.

Enough has been written as an introduction to the illustrations to explain the subject generally where needed, the writer can only repeat that each illustration has a separate explanation, which will, he hopes, elucidate any points of interest.

One further hope is, that this work may eventually prove of use to those whom it is intended to benefit, namely, the large number of skilful men who make up the metal working artisans of Southern India.

W. S. H.

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ILLUSTRATIONS.

Fig. 1.

Fig. 1.

A standing Ganesa, much simpler than the other examples illustrated, as to his dress and ornaments. He holds in his hands the usual attributes; in the first right hand the elephant goad; in the second right hand a portion of his tusk broken in his fight with Girjamukha.

The first left hand holds a bit of rope or noose, and the second left hand a cake on which often the end of the trunk rests.

This example is in the Government Museum.

Fig. 2.

Fig. 2.

A copper figure of Natesa, that is, Siva as the "dancing lord."

This image, which is one of the most important artistically of any in the Government Museum, is not so well known, nor so frequently represented in illustration, as is figure 27, which is similar in many respects.

The base is almond-shaped and the "aura" of fire and the matted hair seen in the more complete figure 27, are missing.

The almost spider-like litheness and attenuation of the limbs gives it a very gay and graceful appearance, by no means so apparent in the other example which is somewhat heavy by comparison.

It is just over half life size and from its general appearance is probably some what older than figure 27, though the rapidity with which metals oxidize in tropical countries does not make the test of corrosion a very safe guide as to age.

Fig. 3.

Fig. 3.

An elaborate figure of the goddess Kali, one of the names and forms of Parvati, the wife of Siva.

The goddess, represented with eight arms, is standing on the rump of a buffalo which she has killed with her trident.

From the neck of the buffalo a "Mayasuran" emerges. [(Asura = non-god or enemy of the gods; "Mayasuran" = an asuran which has made itself invisible, that is, has taken refuge in the body of the buffalo.)]

On the right of the goddess is a lion, her vehicle.

In her hands are held her various attributes. In the right hands (1) a trident (missing), replaced in drawing by a knife, (2) chukram or disc, (3) arrows, (4) sword.

In her left hands are: (1) resting on the head of the asuran, (2) conch, (3) bow, (4) shield.

The small figure has a shield in its left hand and a sword in its right.

Its left leg is coming out of the neck of the buffalo.

This group is important on account of its being a very elaborate example of casting in two metals. As is usual, the flesh parts are of copper and the dress and ornaments of brass.

The buffalo on which the right foot of the goddess is placed is of copper, with brass head and tail ornaments. The small figure is of brass, as is also the lion.

The lower part of the stand is of copper with the ornamental part above, of brass.

Although, it is very difficult in a drawing of this sort to accurately represent the different metals, in this, as in the other examples of casting in two metals, figures 9, 15 and 20, the copper parts are represented dark and the brass parts light.

The group was probably made in Tirupati.

It belongs to R. F. Stoney Esq.

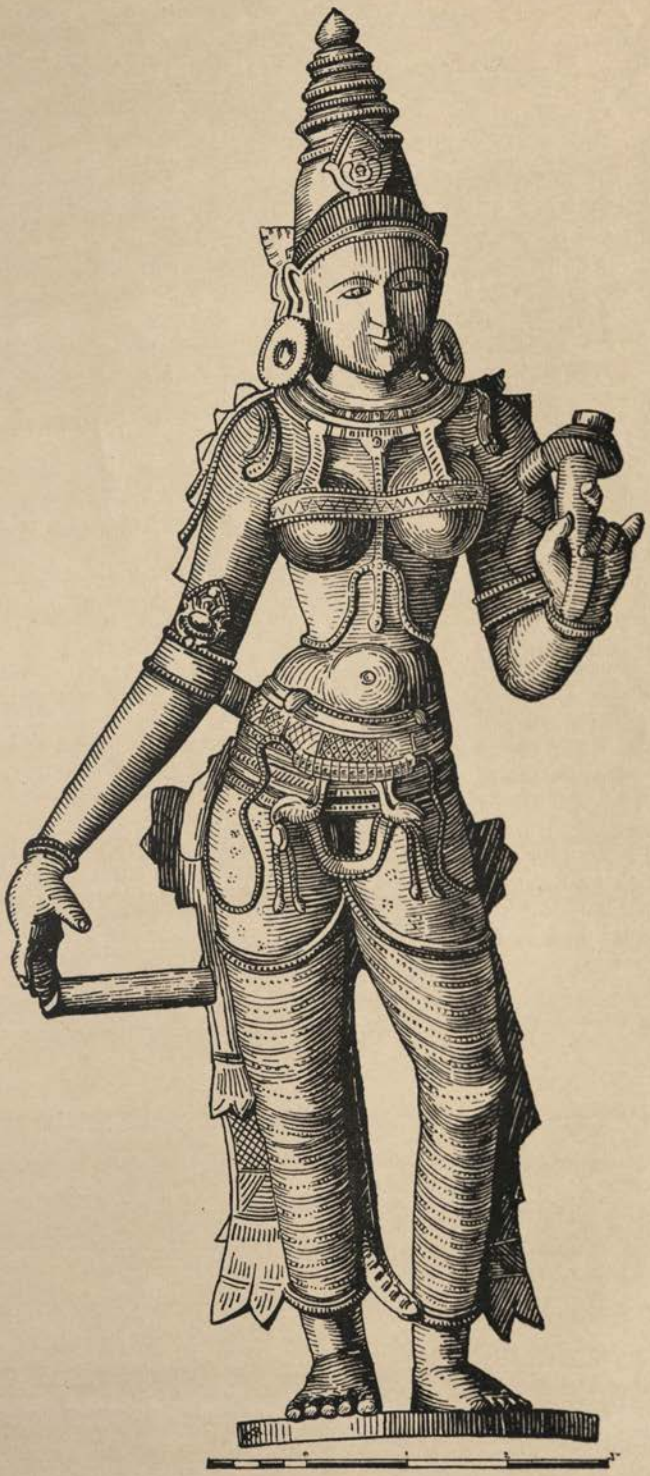


Fig. 4.

Fig. 4.

A typical specimen of a goddess (ammen).

It probably represents Bhumidevi, second wife of Vishnu, in a usual attitude, the left hand holding a lotus and the right extended by her side.

The bars connecting the right arm and the right hand to the body, and the lotus to the left shoulder are provided for channels for the moulten metal to run through when casting. They are generally removed in the finishing of the figure.

The figure is cast in copper and was found in North Arcot. It is in the Government Museum.

Figs. 5 & 6.

Figs. 5 & 6.

5. A figure of a goddess, with the right leg overhanging the pedestal and the hands in the attitude of teaching.

It is interesting to compare this with the other figure on this plate which was found with it, though both are graceful and beautiful, the right-hand figure is much the finer of the two, although the comparative largeness of the hands and smallness of the feet is certainly a defect in proportion.

Both figures were found in Komal village, Mayavaram taluk, and are in the Government Museum.

6. A figure of a goddess with the left leg overhanging the pedestal, the arms and hands in the attitude of teaching.

The long slim waist and pose of this figure is full of elegance and it is, perhaps one of the most charming, of any here illustrated.

It is cast in copper.

Fig. 7.

Fig. 7.

A figure of Buddha with his legs folded in the usual position for meditation with the soles of the feet upperwards.

It is somewhat unusual to find figures of Buddha in South India, and the fact of this example being hollow instead of solid and the general technique and modelling, all point to its having been imported, probably from Ceylon.

It is cast in an alloy approaching brass or bell-metal and is in the Government Museum.

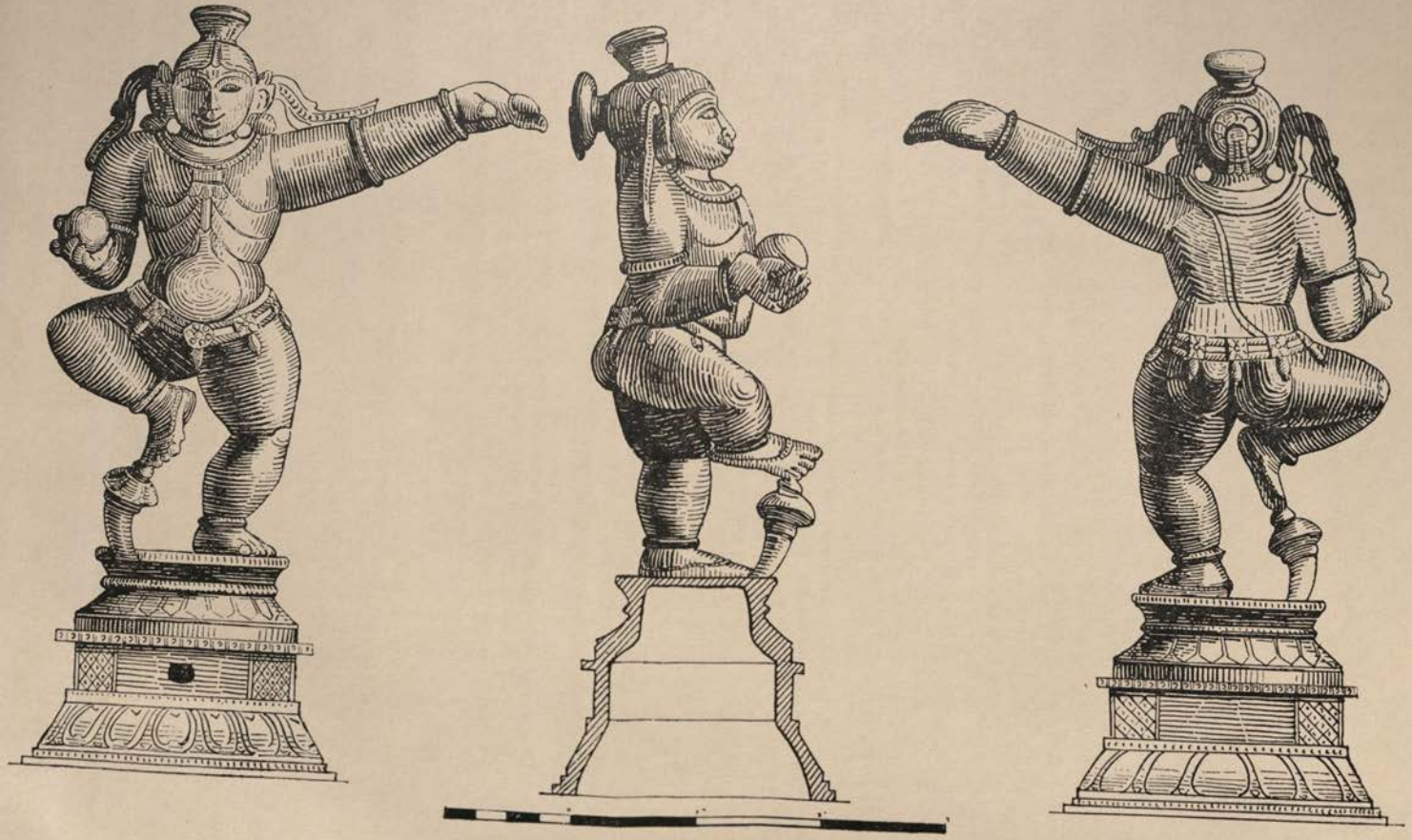


Fig. 8.

Fig. 8.

A figure of Krishna, eighth avator of Vishnu, cast in the alloy known as "Panchaloham", or five metals.

The figure is in a standing position with the right foot raised and resting on a lotus, the left arm extended and the right hand holding the ball of butter.

It is proportioned according to the system of five faces or "thaloms".

There is nothing very remarkable about the figure artistically; it is a very common and characteristic example, but its alloy, composed of the five metals—gold, silver, copper, tin and brass (copper and zinc,—*not* iron as is frequently stated)—makes it somewhat interesting.

This alloy is considered to be a particularly happy and auspicious group of metals for casting images of deities. On enquiry from various metal-workers as to the proportion of each metal, it was ascertained that the sastras left the proportion "to the entire discretion of the artist, the main object being to impress the idea of the composition of the five elements in the universe—gold representing sky or other; tin, the air; copper, fire; silver, water; and brass, earth".

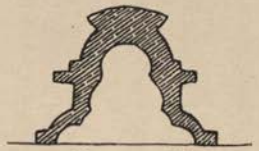
It will be noticed that brass is reckoned as a pure metal, but the actual fifth metal is brought into the composition by the zinc, which is with copper, the one other constituent of brass. One of my informants adds that practically copper forms the chief ingredient, the brass and pure tin are added in sufficient quantity to make the composition pour and run well and produce a bright colour.

The addition of gold and silver is only nominal.

The head metal-working maistry at the School of Arts, who is himself well skilled in such work, explained to me also that the addition to the usual copper or bronze alloy of gold and silver to form "panchaloham" was wholly dependent on the amount of the precious metals available.

The figure illustrated belongs to the Victoria Technical Institute.

PLAN OF A



SEC. ON C.D.

PLAN OF X

Figs. 9 & 10.

Figs. 9 & 10.

9. A cast brass and copper figure of Garuda resting on a tortoise, generally mistakenly alluded to as the "Kite god".

Garuda is the vaghanam or vehicle of Vishnu, the deity riding astride the shoulders with his feet resting on the outstretched hands of the vaghanam.

A similar vehicle is illustrated in figure 26. The above figure, as in that of Kali (Figure 3), is cast in both brass and copper, the flesh parts being in copper and the clothing and ornaments in brass. The illustration does not, unfortunately, show the contrast of the red and yellow metals sufficiently.

The nose is often more accentuated than in this example and is more like the beak of a kite.

The wings, which grow from the upper arms, seem a decided anatomical improvement over the common European manner of growing them from the shoulder blades.

Figure 10 is a nicely modelled Krishna of an alloy approaching bell-metal in composition.

Both are owned privately and are of South Indian made.

Figs. 11 & 12.

Figs. 11 & 12.

11. The crawling figure is a usual form of the youthful Krishna generally called "Balakrishna".

The position is a characteristic one of Indian babies when learning to walk, one foot on the ground and draging the other foot and leg behind.

12. The lower figure represents the male attendant of a god.

The right hand holds a "chowrie" (a fly whisk made of a yak's tail).

It is probably part of a group such as is seen in figure 26.

Both figures 11 and 12 are in the Government Museum.

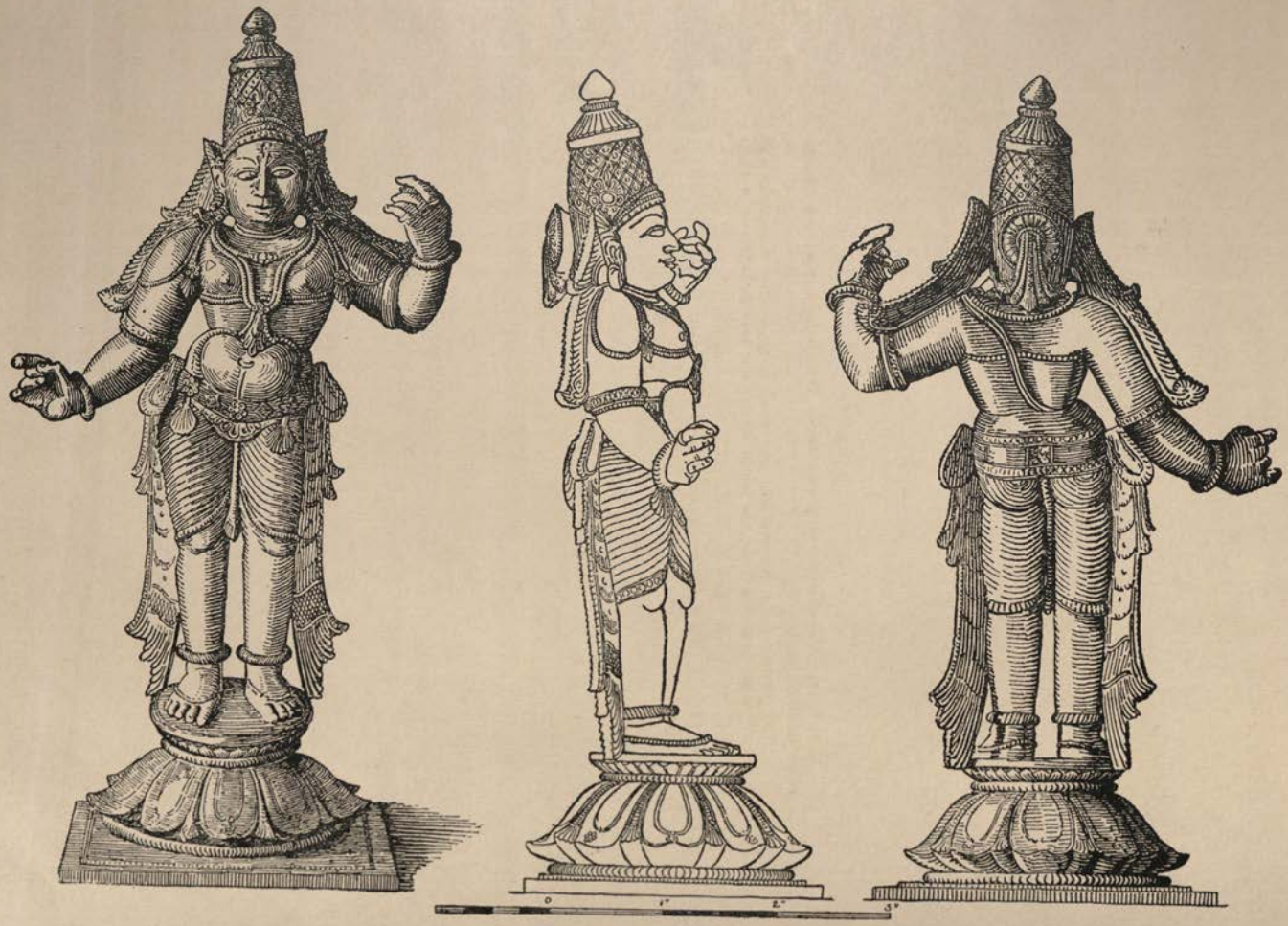


Fig. 13.

Fig. 13.

A figure of a male attendant of a deity. The left hand raised and the right partly extended by his side.

This figure and the next are of a type which is very common in Southern India. A short thickest body and limbs, the whole figure being only about six faces in height and the thickness and length of the arms very large in proportion to the body.

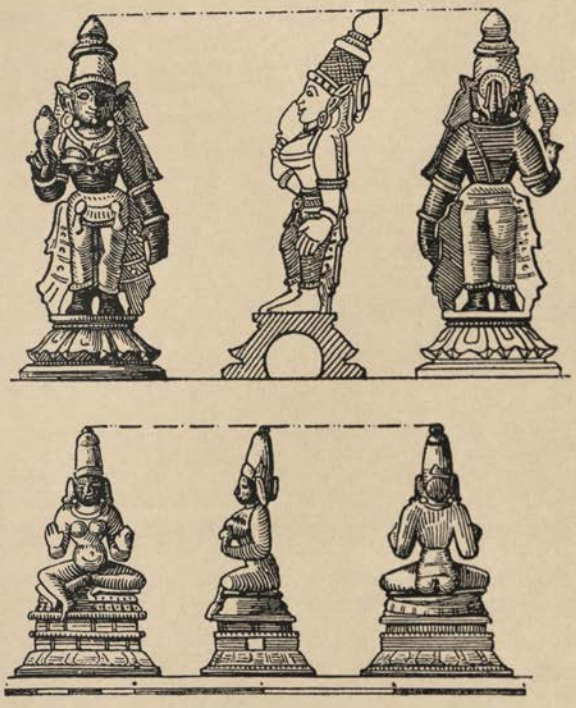
It is a Vaishnavite figure.

It is cast in copper and is in the Government Museum.

Fig. 14.

Fig. 14.

A figure of Lakshmi, wife of Vishnu, holding a lotus in the right hand. It is cast in copper and is in the Government Museum.



Figs. 15 & 16.

Figs. 15 & 16.

15. These small figures are cast in brass and copper.

There is nothing remarkable about them except the process of the casting.

The figure 15 is rather shorter and dumpier than usual and the arms very long and thick in proportion to the body.

Figure 16 is a rather well-proportioned figure though very small in size.

The entire image except the face (which is of copper) is cast in brass.

Both these figures were probably made at Tirupati.

They belong to R.F. Stoney, Esq.

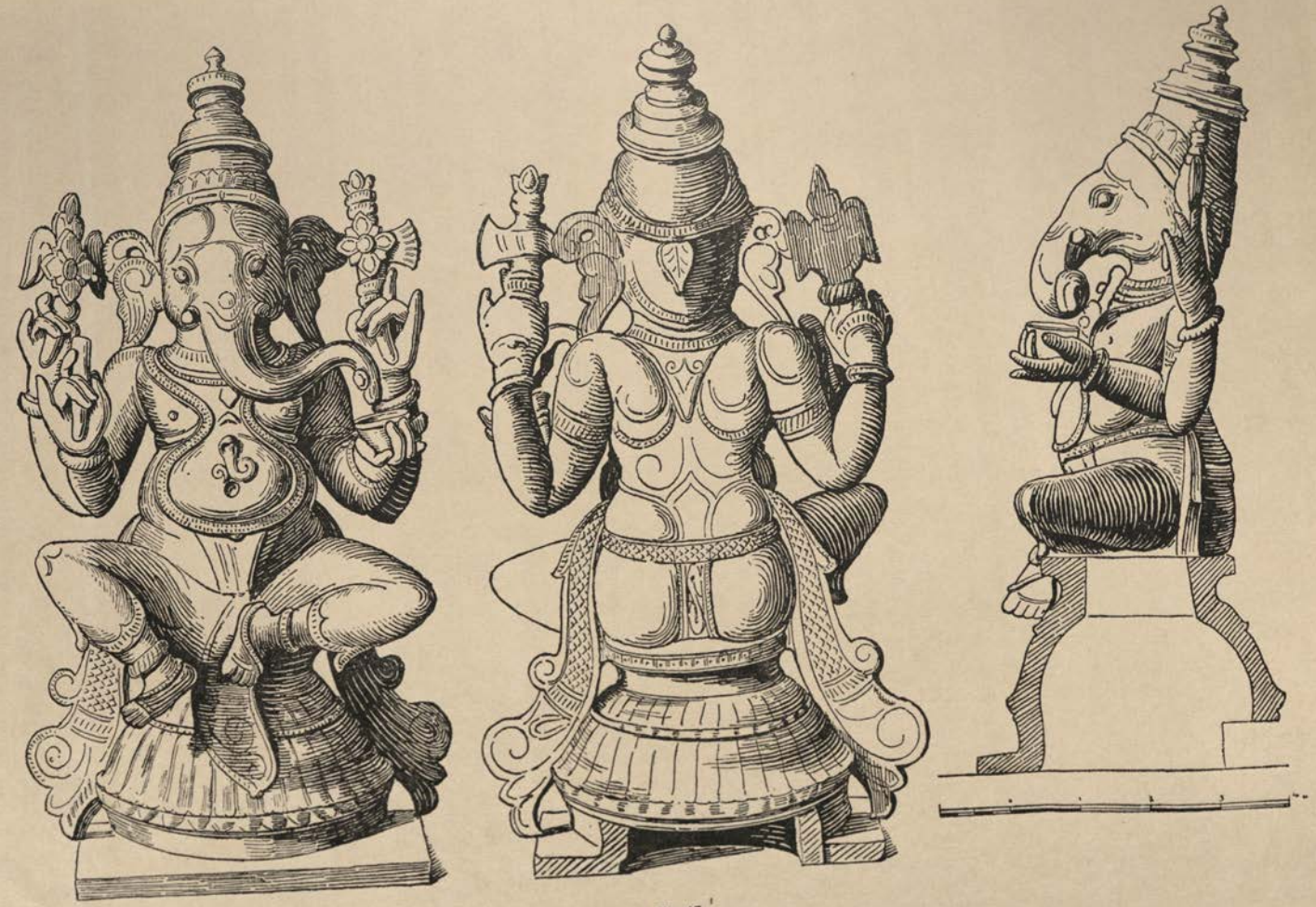


Fig. 17.

Fig. 17.

A sitting figure of Ganesa or "Ganapathy", the Elephant god, first son of Siva and Parvati.

Another of his names is Vighnesvara (Lord or remover of obstacles).

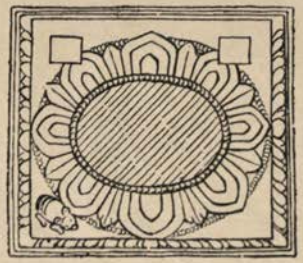
There is probably no single god so universally worshipped in South India, particularly, as Ganesa. "In his honour many small pagodas have been erected, in which he is daily worshipped with offerings; moreover, his image stands everywhere by the way side, under trees, at thoroughfares, and in all the pagodas of Isvara; and he gets always the first offerings, because all that would prosper should be begun in his name."

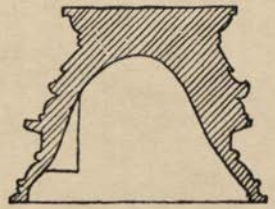
The small shrines so frequently met with in all the larger thoroughfares in Madras nearly always contain the image of Ganapathy, and one has only to watch the usual passer-by stopping for a moment to offer homage, or, better still, to go on a Friday night to some well-known shrine in a crowded quarter and observe the continual stream of people coming to make sacrifice to realize to what extent this god is worshipped.

The figure here shewn is probably one of the oldest of the images illustrated and, aside from its technique, is interesting in that he is holding an axe in his first left hand instead of the more usual bit of rope.

It is in the Government Museum and of early South Indian make. An interesting detail of the manner of casting peculiar to the majority of South Indian gods may be seen in the section shewn at the right-hand side of the plate.

It will be noticed that the seat or base is hollow while the figure above is solid. This is practically universal even in cast figures of a much larger size.





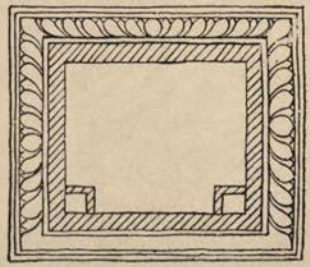


Fig. 18.

Fig. 18.

A finely modelled copper image of Ganesa with his Vaghanam, the bandicoot, on the stand below.

The figure is remarkable for its careful modelling and exquisite finish, and precision of every detail.

It is of recent Tanjore workmanship and is owned privately.

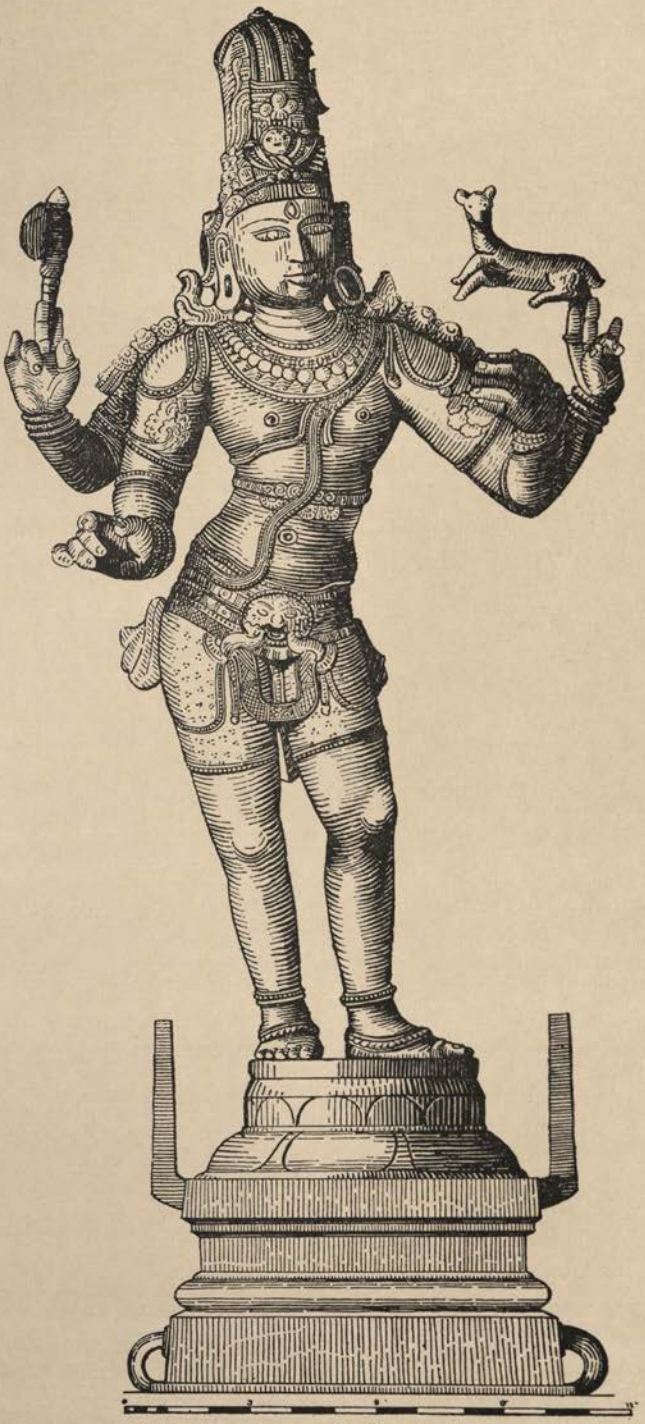


Fig. 19.

Fig. 19.

A figure of Isvara or Siva, with four arms.

In his first left hand is his attribute the antelope (man), in first right hand the battle axe (marhu).

The other two hands are empty.

The figure stands in an easy and graceful attitude with the right hip thrown out.

The proportions are not very carefully worked out, the figure being a little too short in the legs.

In the ears may be noticed the two different forms of ornament affected by men and women, thus symbolizing the god's dual personality.

It is cast of copper, of South Indian workmanship.

It is in the Government Museum.

Fig. 20.

Fig. 20.

A cast brass and copper image of Ganesa, standing. The standing position is less frequently met with than the sitting, though by no means rare.

This figure is a good example of the method of casting in the two metals referred to in figures 3, 9 and 15.

It bears a considerable resemblance in its technique to the Garuda (Figure 9) and was probably made at Tirupati about the middle of the nineteenth century.

The drawing fairly well shows the distribution of the two metals.

The darker metal (copper) is used for all the flesh parts, as in the other examples of casting by this method, and the ornaments, symbols, dress and part of the pedestal are of brass.

The combination is a very satisfactory one artistically, from the point of view of colour, much more so than is the case in so much of the modern Tanjore work in which silver is often introduced.

In the case of copper and brass, not much account need be taken of the relative proportion of the two metals, as both are of a warm tone, and if the contrasts of dark and light are skilfully managed it is generally enough; but in the case of silver and copper, the silver being of a decidedly cold tone, unless either it or the copper strongly predominates in quantity the result is invariably bad.

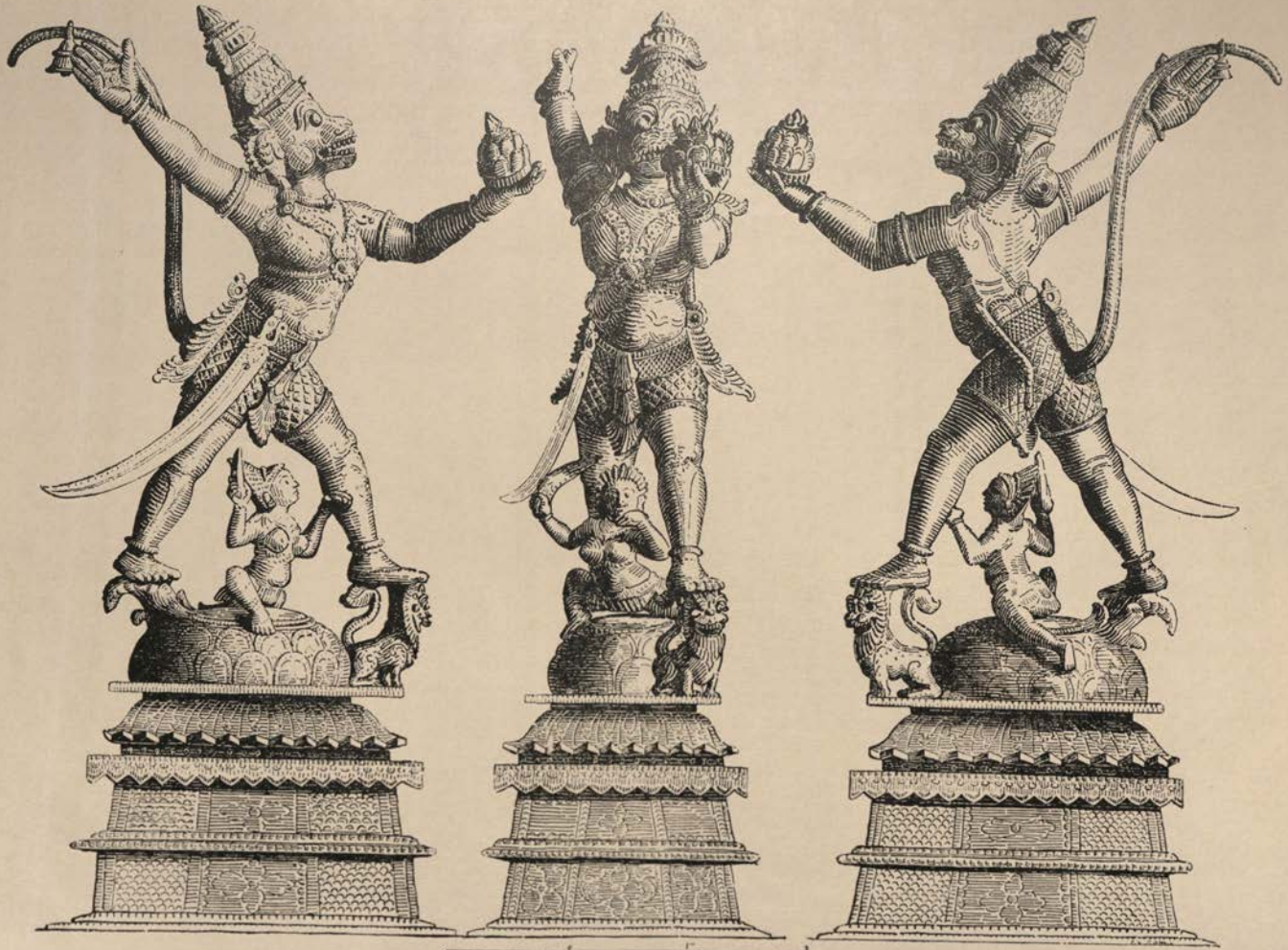


Fig. 21.

An image of Hanuman, the "Monkey God," cast in copper, made at Madura about 1907.

It is an excellent example of the work of a modern artist, who, while showing distinct individuality of technique, has nevertheless preserved all the traditional canons of proportion necessary in a religious work of this sort.

It is a matter for regret that the same person who was capable of fashioning this work does a much more lucrative and steady trade, than the making of well-finished new images, by producing a considerable amount of carelessly-made figures which he half-finishes and then treats with various chemicals to make them look "ancient".

How many globe trotters, who have visited Madura and Madras, and have been taken in by this work, which, with all its inartistic "faking", has still much to recommend it, it would be difficult to say.

In a recent lot of "old" images received by the Victoria Technical Institute from Madura a piece was taken at random and given a bath in acid to remove the apparent evidences of age.

The result was as expected, and the figure when deprived of its coating of dirt, showed clear evidence of having but recently been cast.

Hanuman, according to tradition, assisted Rama in his fight with Ravana; he is regarded as a demi-god.

In his left hand he is holding a mountain, the right hand is raised.

He is represented in a walking attitude with his left foot on a lion.

Below is a figure of Sugriva.

The sword by his side is of brass, applied, and not a part of the casting.

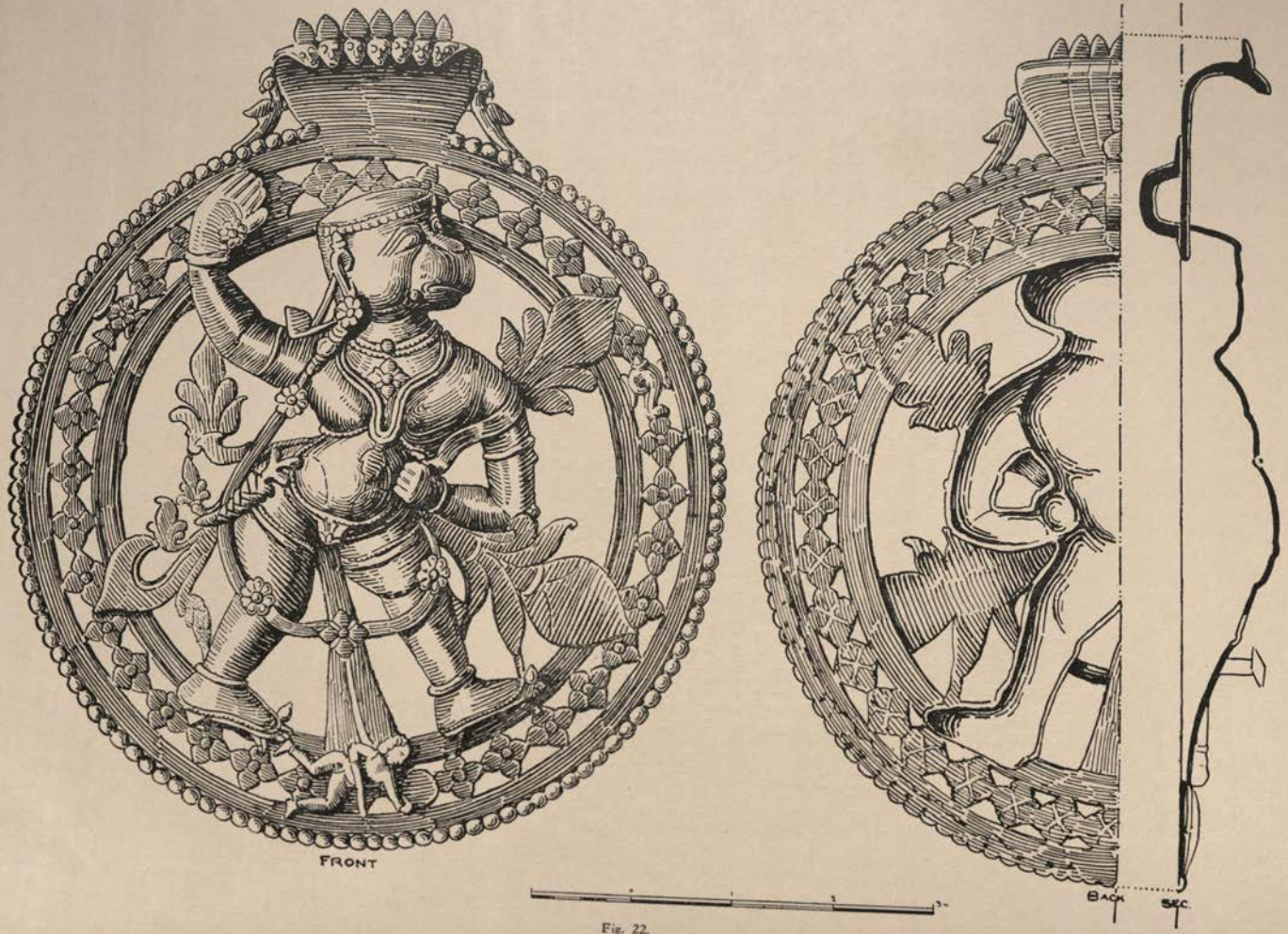


Fig. 22.

Fig. 22.

A cast brass pendant ornament, representing Hanuman. These pendants are sometimes worn suspended by a cord around the neck, and they may also be found at times hung over the backs of the trained "Siva" bulls which mendicants lead about the streets.

The figure is in an usual running attitude with the right arm extended above. The circular ornamental frame work is finished at the top with a seven-headed cobra.

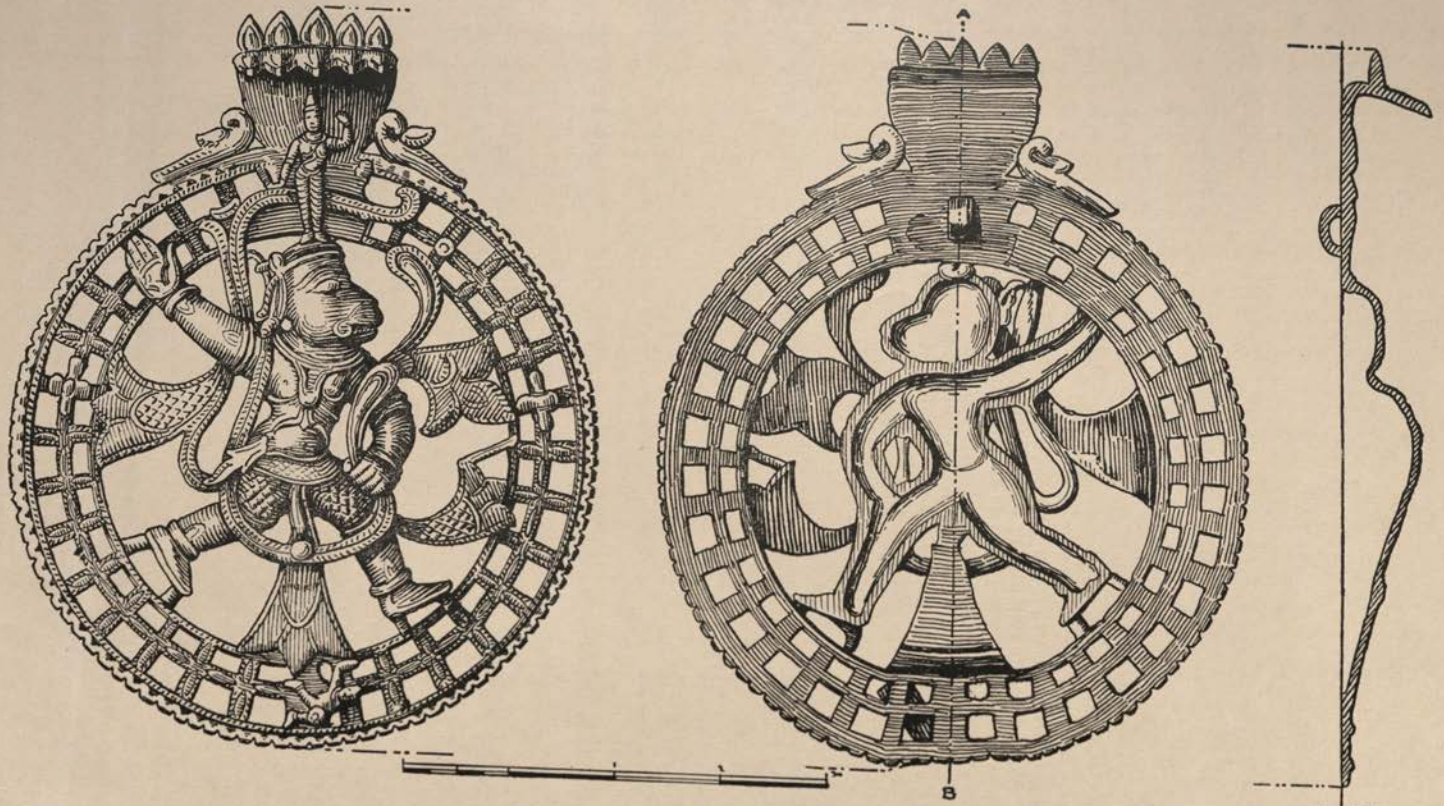


Fig. 23.

Fig. 23.

This figure is in all essentials like the preceding one, but is smaller and of slightly inferior pattern.

The back view and section show the way in which it is cast; the figure in high relief and the ornamental circular form, flat.

It is a typical case of the Hindu workman's traditional dependence on casting in metal to obtain relief in preference to repousse work, which would probably be resorted to in Western countries to obtain the same effect.

The result is a considerably heavier article which would probably be considered an advantage by the Hindu workman and a disadvantage by Europeans.

These figures are among the most decorative of all the ornamental brass and copper work to be found, the relief, together with the pattern and piercing, giving a most ornamental effect of light and shade and at the same time bringing out the decorative qualities of the metal to the highest possible degree.

They have an almost Byzantine effect of richness, and are produced by, artistically considered, the same manner of working; that is, the comparatively high relief of some parts strongly contrasted with the deep and changing shadows of the pierced spaces.

Inferior modern examples of these articles are still commonly found in the brass bazaars, but old and well-finished specimens are rather rare.

The two illustrated are owned privately.

Fig. 24.

Fig. 24.

A cast brass group of Subbramanya on his vehicle, the peacock, with his two wives Valliammai and Devayanai.

This and the following figure are the two ends of a "kavadi" (or yoke) used for carrying religious offerings.

These kavadis are usually made of wood rather than of metal.

The group is cast as in the figures 22 and 23, in high relief, of relatively thin metal.

Fig. 25.

Fig. 25.

This figure is intended for the opposite end of a kavadi, to the preceding one.

It represents Ganesa on the bandicoot, his vehicle with two attendants.

These subjects, Subbramanya and his brother Ganesa, are the usual ones used to decorate the ends of kavadis intended for religious purposes.

The pair were obtained from Tanjore by the Victoria Technical Institute.

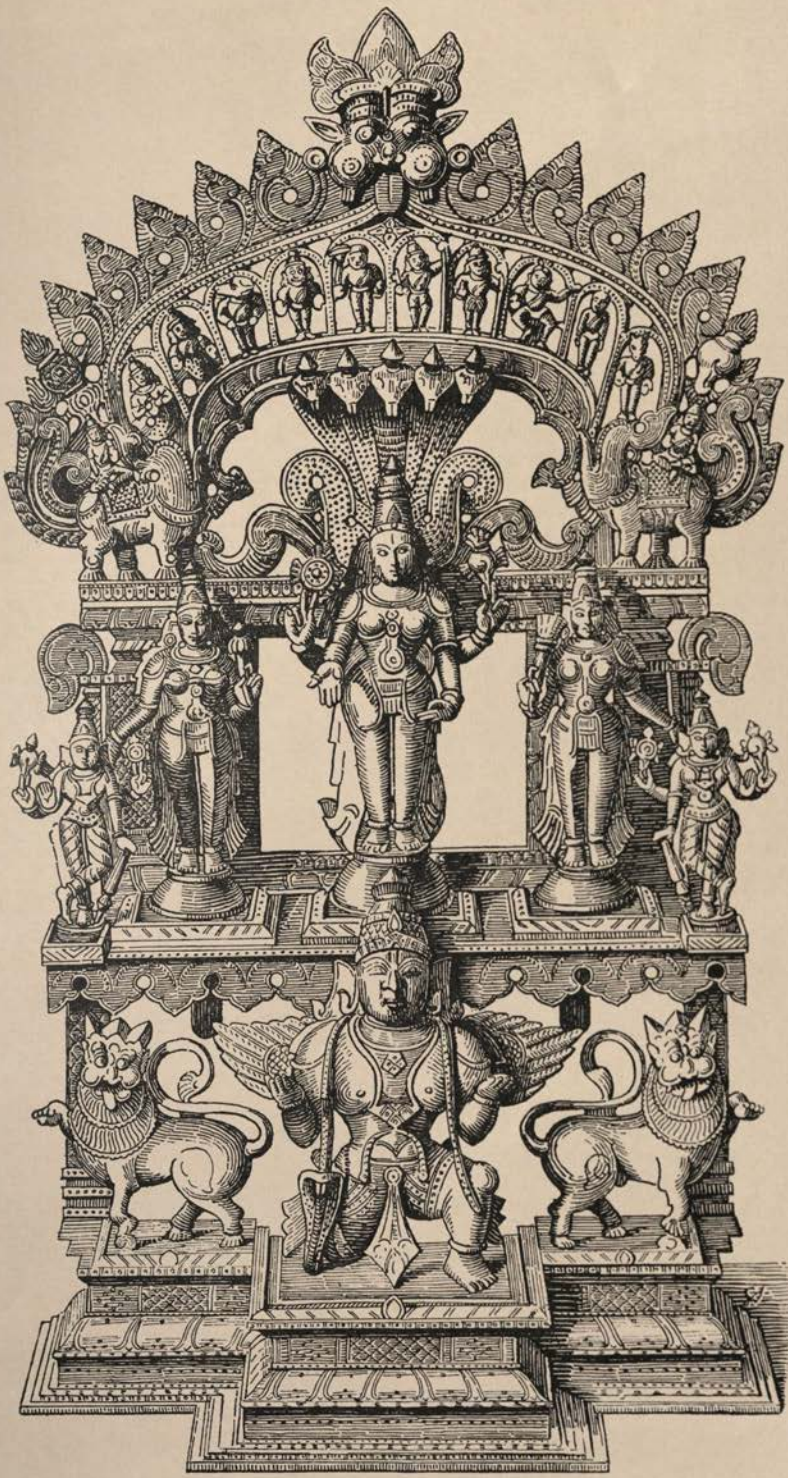


Fig. 26.

Fig. 26.

This group is a very characteristic specimen of South Indian metal-work, showing many of the beauties of a rich and elaborate idol with its various accessories, and at the same time, it shows most of the artistic faults of such works as well.

The arrangement is considerably at fault, artistically speaking (aside from the anatomical faults) because the principal figure, as to size, is the vehicle Garuda, in the immediate centre of the base, when one would naturally expect that the deity himself should dominate the other figures.

The entire group with the exception of the three central figures of Vishnu and his two wives (which are of copper) is cast of brass.

As is usual with these groups, it is ingeniously arranged so that it may be taken apart, this fact of course adding to the facility with which it may be cast and finished and also cleaned.

The group is in two stories, Vishnu with his wives and attendants above, surmounted by an elaborate arched shrine back and Garuda with a lion on each side, below.

The group is in the Government Museum.

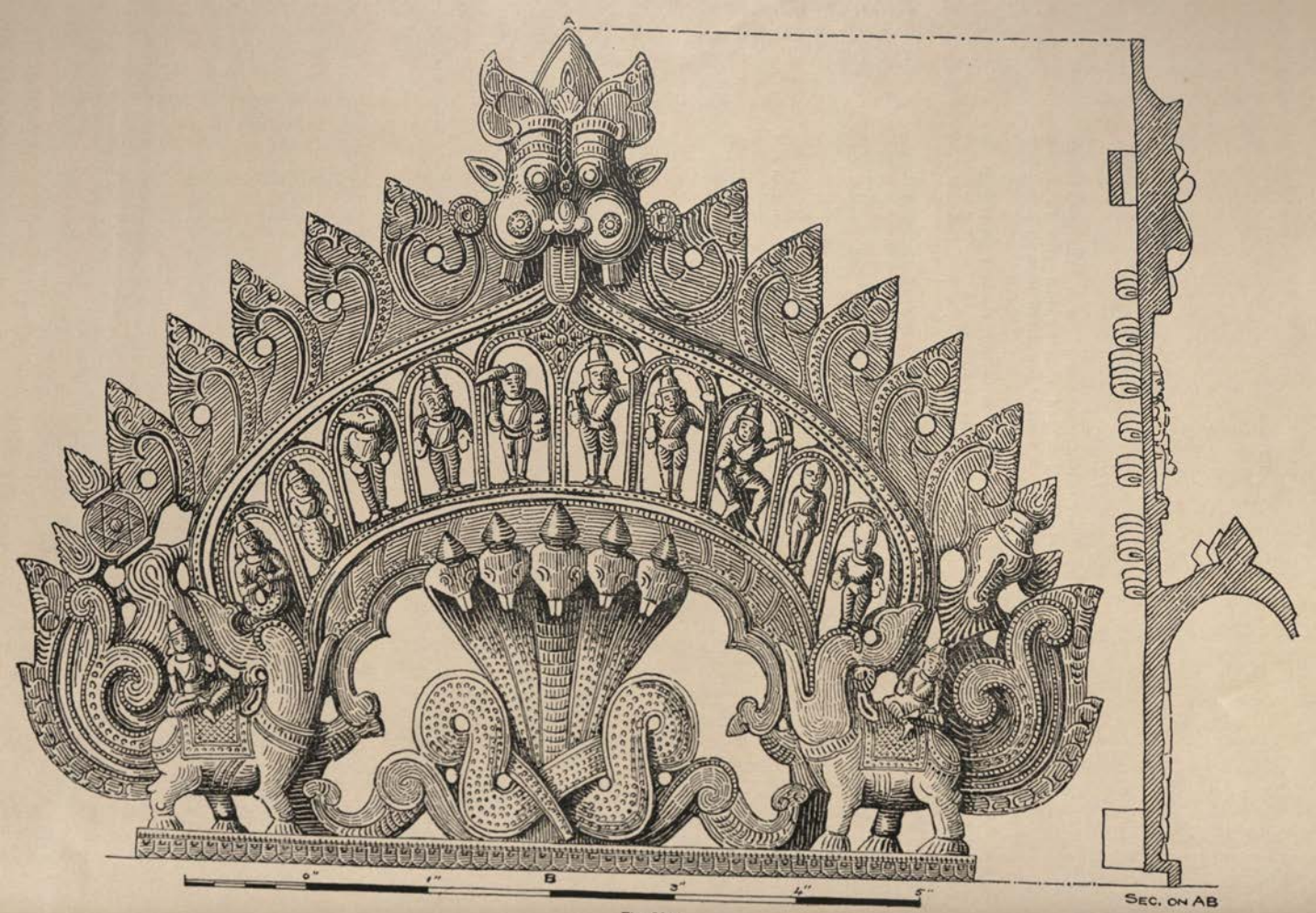


Fig. 26-A.

Fig. 26-A.

This detail of figure 26 shows the front elevation and side section of the top of the shrine, slightly larger than in the original.

In a series of arched openings are the ten avatars of Vishnu, above which is a lion's head and below a five-headed cobra. On each side are "Sea monster lions" on each of which is seated a small figure and above these, again, are the conch and chukram.

The sectional view explains the modelling, which, except for the projecting cobra heads, is kept nearly flat.

The small rings at the back are intended to receive incense sticks or decorations when the idol is in use.

Fig. 26-8.

Fig. 26-B.

These details of Vishnu and Garuda from figure 26 are eloquent of the disregard for anatomy, so often found in modern South Indian work.

Indeed, the figure of Vishnu with its enlarged hips and thin waist much more resembles a woman's figure than a man's, not to dwell on the stumpiness of the proportions, which is modelled on a basis of less than five heads to the height, when a taller figure would have been not only more sastraic but infinitely more dignified and beautiful.

On the other hand, the figure of Garuda, which is frankly of the grotesque order, does not offend one's artistic sense to the same extent as the Vishnu.

The wings growing from the upper arms are distinctly an ornamental feature.

The side view shows the kite-like nose characteristic of this vaghanam.

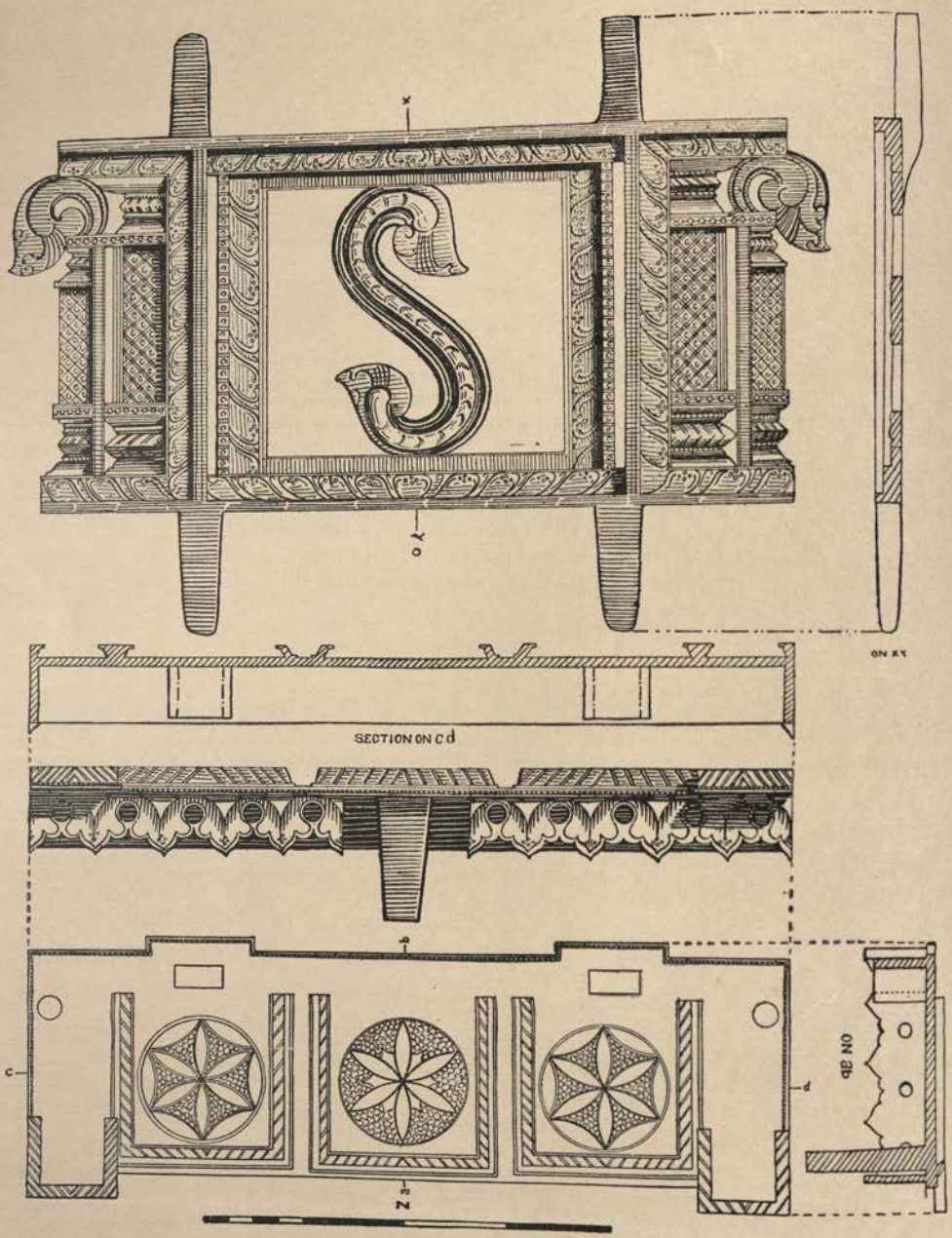
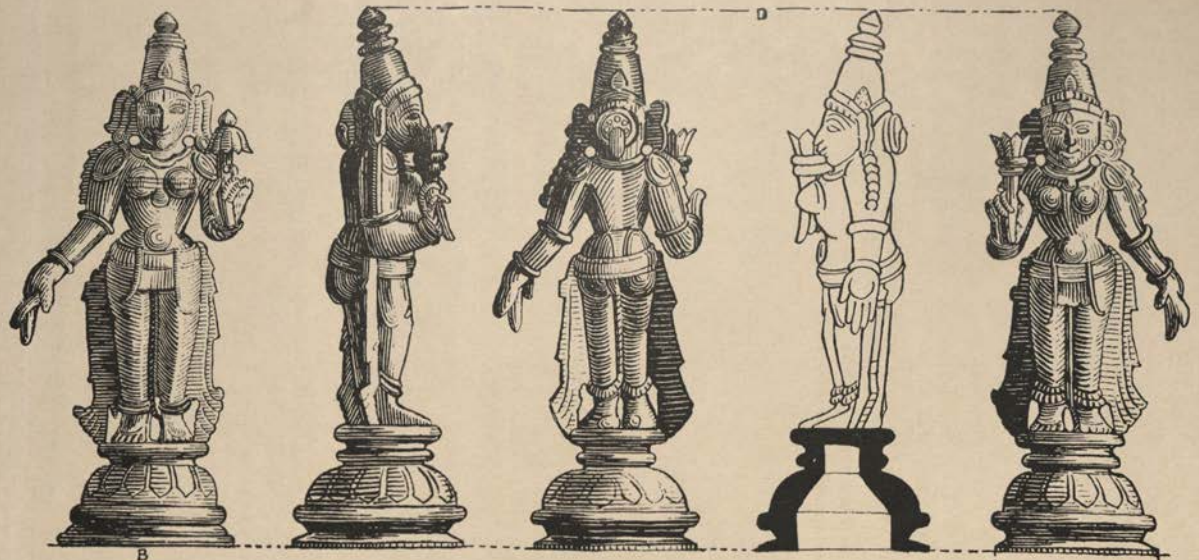


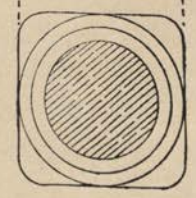
Fig. 26-c.

Fig. 26-C.

The upper figure shows the detail of that part of the shrine (Figure 26) directly at the back of the deity and his wives, and the lower drawing is the plan and front elevation of the platform on which these figures stand.

The various sections show the ingenious methods by which the different parts fit, one into another.





Plan of b

Fig. 26-D.

The wives of Vishnu from figure 26 are here shown drawn a trifle larger than full scale.

The feeling for balance is evident when one observes the extension of the right arm of the left hand figure, and the left arm of the right-hand figure.

The tiney figures of attendants on the lower part of this plate illustrate the same principle.

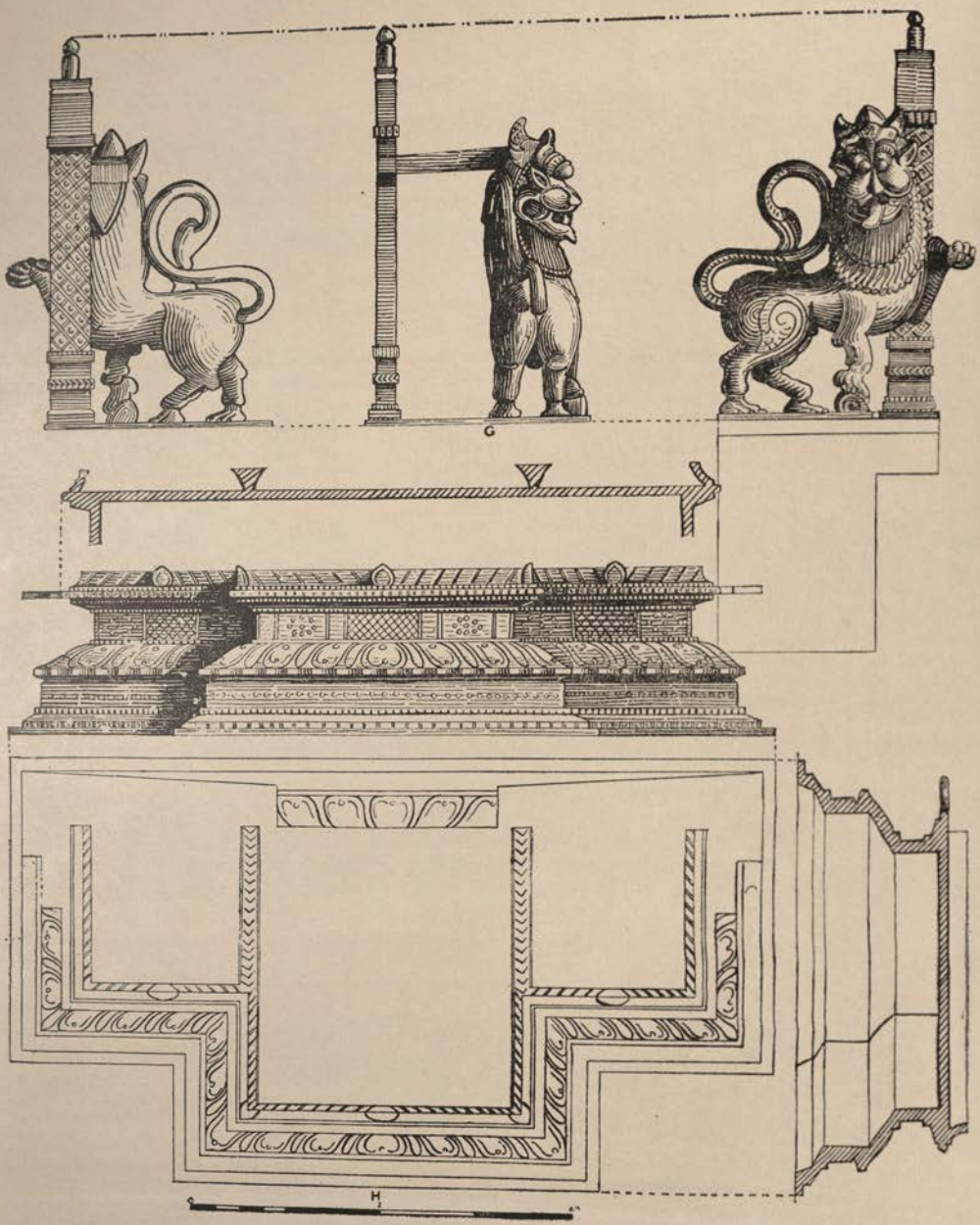


Fig. 26-E.

Fig. 26-E.

The details of the base of group 26 shown on this plate complete the series.

A notable feature of the lion's figure is how exactly it corresponds in its main essentials with the best ornamental and heraldic lions of Western art, though no student would ever for a moment mistake it for anything but an Indian production.

It is but an example of how universal are artistic laws even though they are elastic enough not to interfere with either individual or national characteristics.

Fig. 27

Fig. 27.

This figure of the dancing Siva has been reproduced many times in modern works on Indian art. It is certainly a fine example of South Indian workmanship but its frequent reproduction as illustrative of the art of the south, to the exclusion of many other examples quite as good or even better, has led students to look upon it as almost unique; this is by no means the case, as both in the past and present this particular representation of Siva has been a very favourite subject for makers of images.

In comparing this example with figure 2 one notices the difference in the gracefulness of the poise and the greater sturdiness in the limbs, somewhat to its detriment.

There is, in fact, if one may use the seeming paradox, more convention but less art in this figure than in figure 2, though on actual measurement, figure 2 is more nearly correct according to sastraic rules.

The attributes held in the hands are, in one left hand a flame of fire, in one right hand a drum, and a cobra curled about the second right arm.

The deity dances on a smaller figure which represents a rakshasa or asura, and it is surrounded by a "aura" of flames, 29 in number.

Image-makers are not quite unanimous in deciding on the correct number of flames surrounding the figure, but 27 according to most authorities seems to be correct. However that is a detail often neglected, and on larger specimens often as many as 65 or even more may be counted.

The dual personality of the god is symbolised by the ear ornaments.

The second pair of arms spring from the shoulders as is usual in most South Indian work, but occasionally the second set may spring from the elbows.

The figure is in the Government Museum.

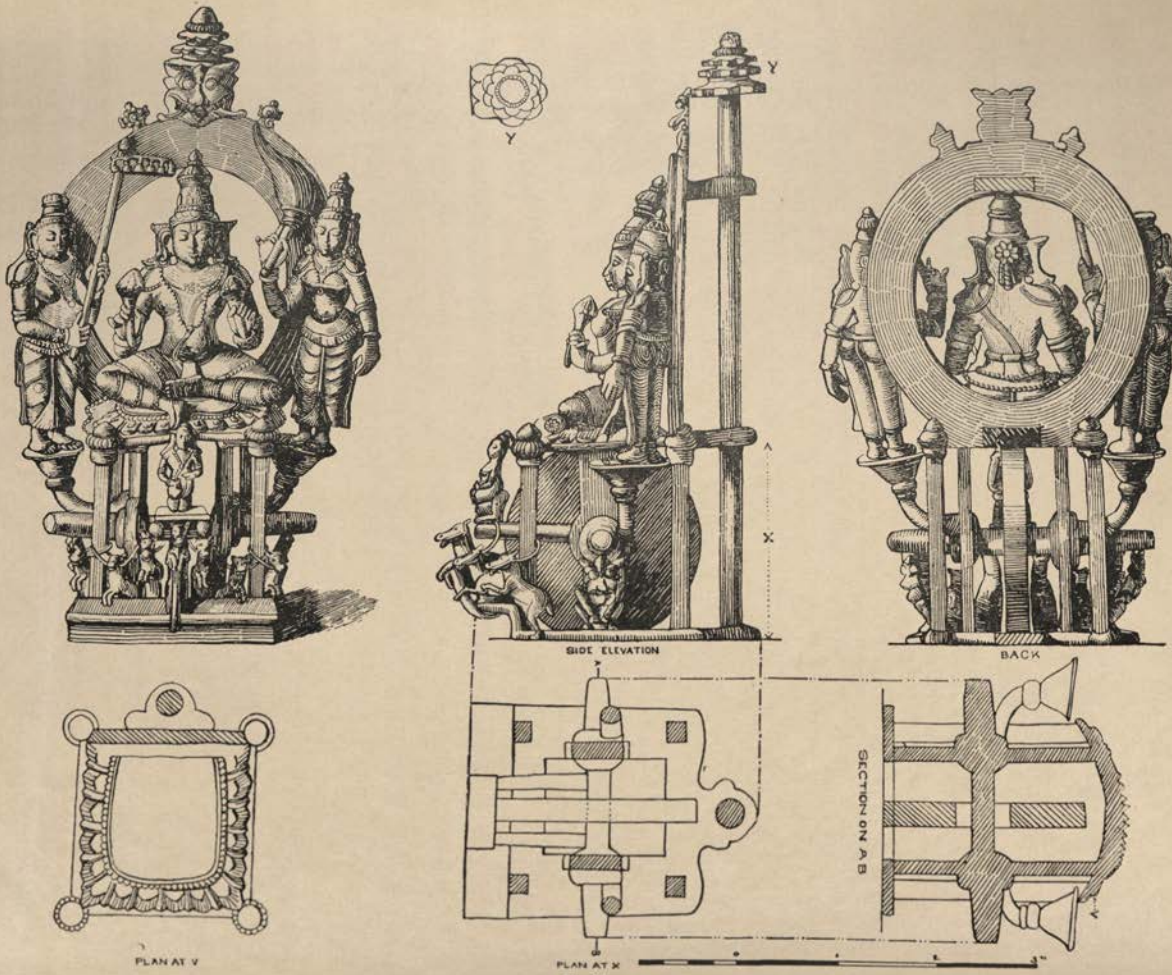


Fig. 28.

Fig. 28.

This Perumal god, Varatharaja (the name of Vishnu at Conjeeveram), is probably an unique example.

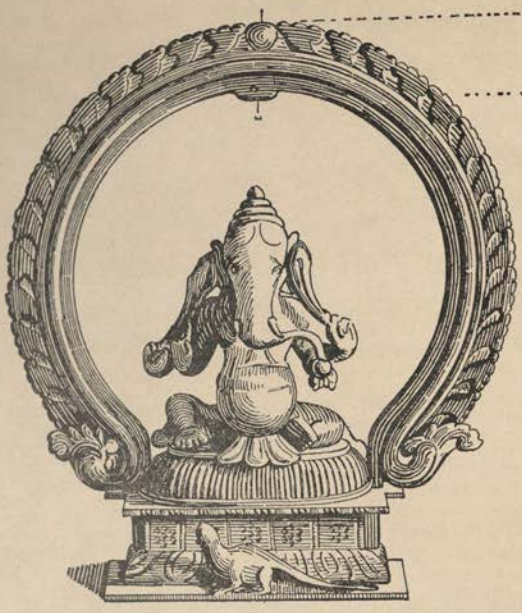
The deity is represented seated on his car with his two wives and holding a lotus in each hand.

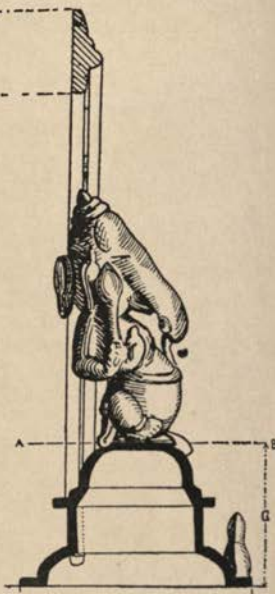
Below is the driver of the car and seven horses.

There is but one wheel, coming directly in the centre under the figure of the god, and the projecting axles of this wheel are supported at each end by a figure of a lion.

The group may truly be said to be more ingenious than beautiful, but it is certainly a most intricate and elaborate specimen of casting. The inordinate disproportion in scale between the actual figure of the deity, and the car and horses is in striking contrast to the disproportion which exists when the actual Conjeeveram god is given his yearly outing in the gigantic car for which the place is famous.

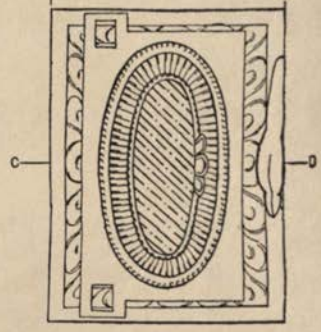
This figure is cast of panchaloham and is in the Government Museum.





SIDE &
SECTION ON C.D.

BACK



PLAN AT C

Fig. 29.

Fig. 29.

This seated figure of Ganesa is interesting on account of its simplicity, which probably is an evidence of its age.

Compared with figure 18, which is a quite modern example, the contrast is most striking. While many of the earlier idols are considerably simpler than most of the modern work, this characteristic cannot be taken always as a sure guide to age, as, for instance, we find in figure 17 a very elaborate conception which is one of the oldest illustrated.

To date any of the old idols accurately is, with our present knowledge, an impossibility.

Indian chronology is an avowedly uncertain thing, and until some find of idols with other articles, such as coins of a known date, or grants of land or property, which can be accurately dated, is found, it is useless to speculate on their age.

At present the nearest approach to accuracy in dating an idol, which had been burried, would be to find out the last date on which it was likely to have been hidden, such, for example, as the latest Mussalman invasion of the district in which the idol was found.

One well versed in both artistic and archaeological studies might, by comparison with the work on old temples, say, with some degree of accuracy, that a particular image in metal was of the same school of workmen as the temple carvings, but here again, putting aside the almost impossible combination of artist and archaeologist, the date of particular carvings on any temple would be most difficult to ascertain.

This idol is cast in an alloy similar to bronze and is in the Government Museum.

Fig. 30.

Fig. 30.

A Perumal god difficult of identification.

On the palm of the left hand is a chank shell and on the right a chukram, these probably indicating that the idol represents Vishnu in some local form.

The shrine is somewhat heavy in proportion to the figure, but the figure itself is of fair proportions and decently modelled.

It was found along with figures Nos. 5 and 6 in Komal village, Mayavaram taluk, in December 1895.

It is in the Government Museum.

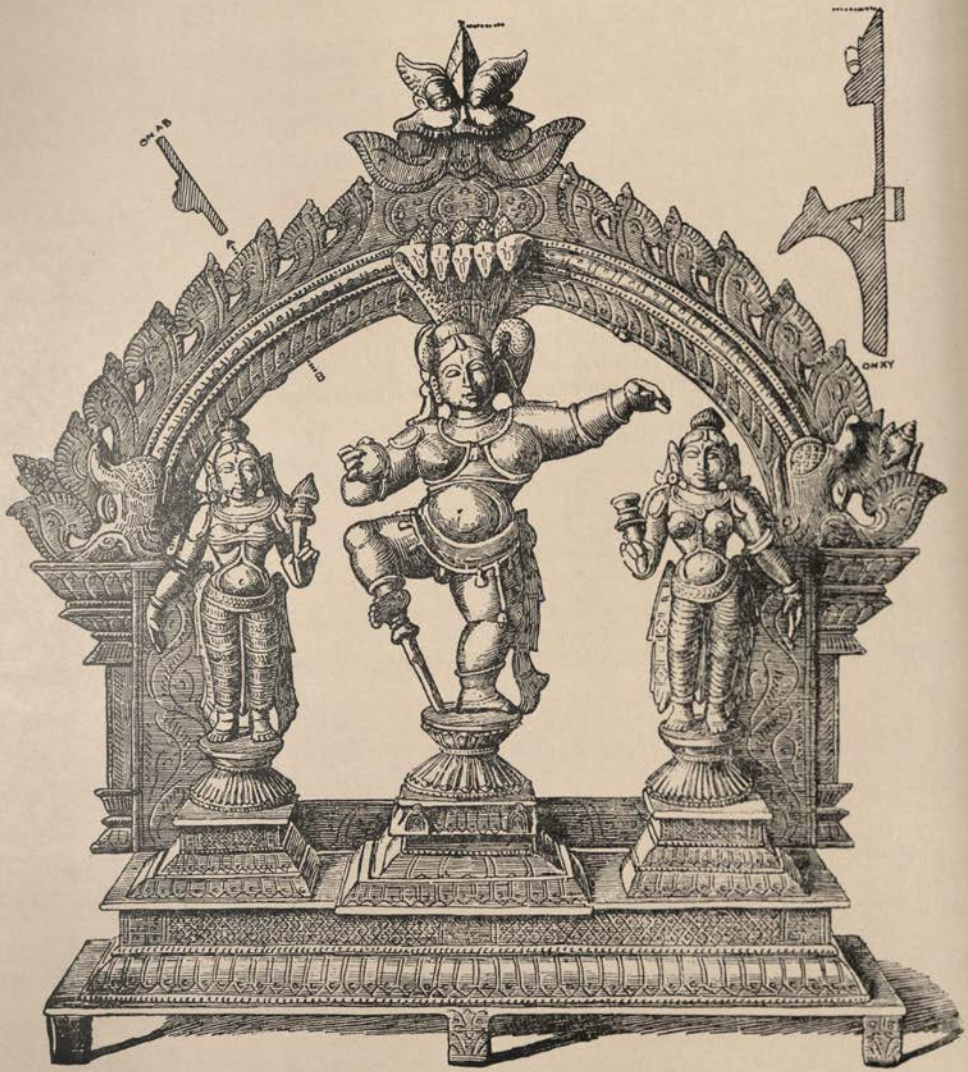


Fig. 31.

Fig. 31.

A group of Krishna with two females, probably intended to represent Rukmini, his wife, and Radha, his favourite mistress.

Krishna, the eighth incarnation of Vishnu, is the favourite form of the deity with most Vaishnavas, and this probably accounts for the great quantity of images of this particular god.

This group is cast entirely in copper except for the central figure which is of panchaloham.

It is in the Government Museum.

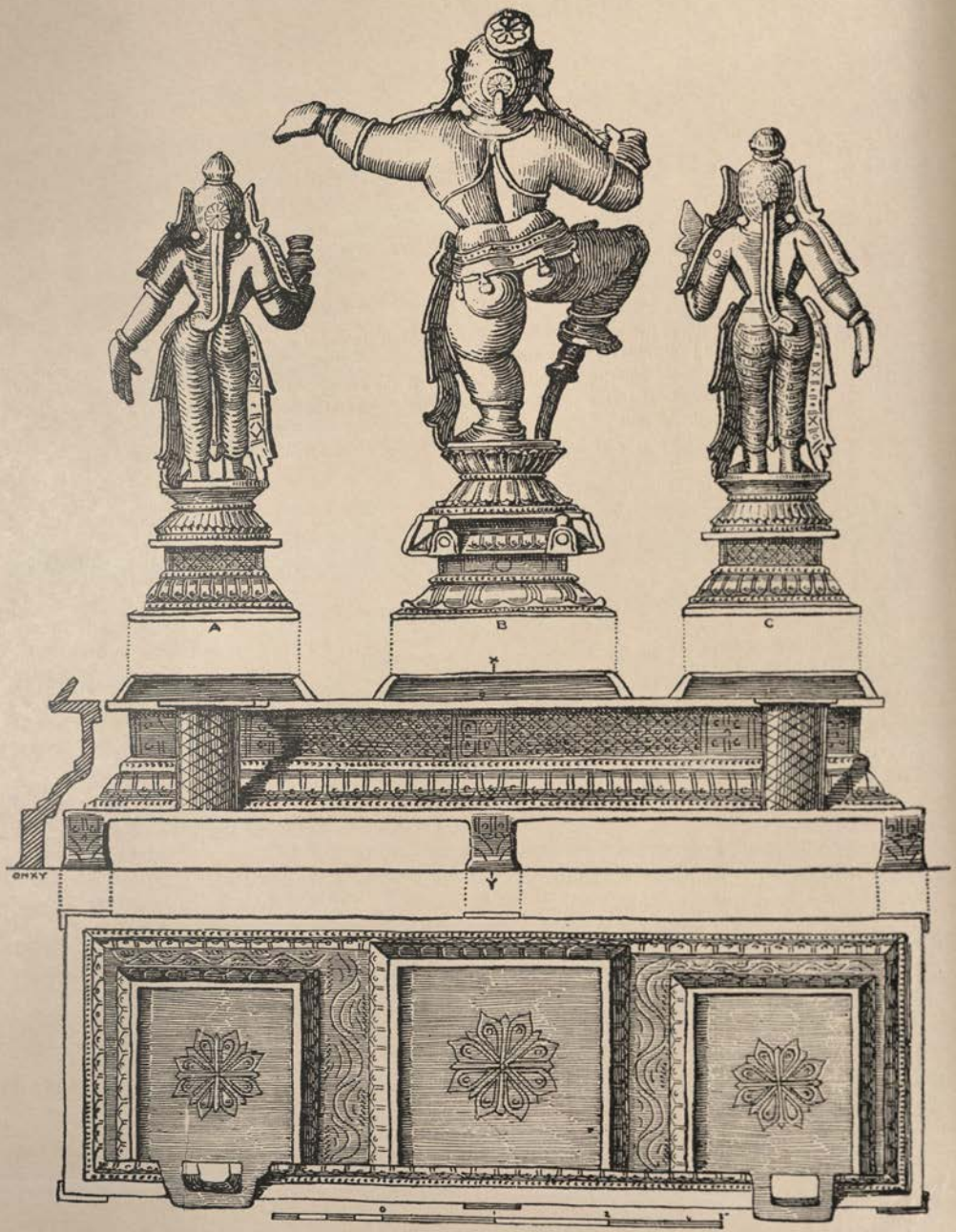


Fig. 31-A

Fig. 31-A.

This plate shews the back view of the three figures in the preceding group together with the pedestal, in plan, and in elevation.

The central figure, though apparently a part of the original group, is much better modelled and finished than the two female figures, and as it is also cast of a different alloy, it was probably not a part of the original group.

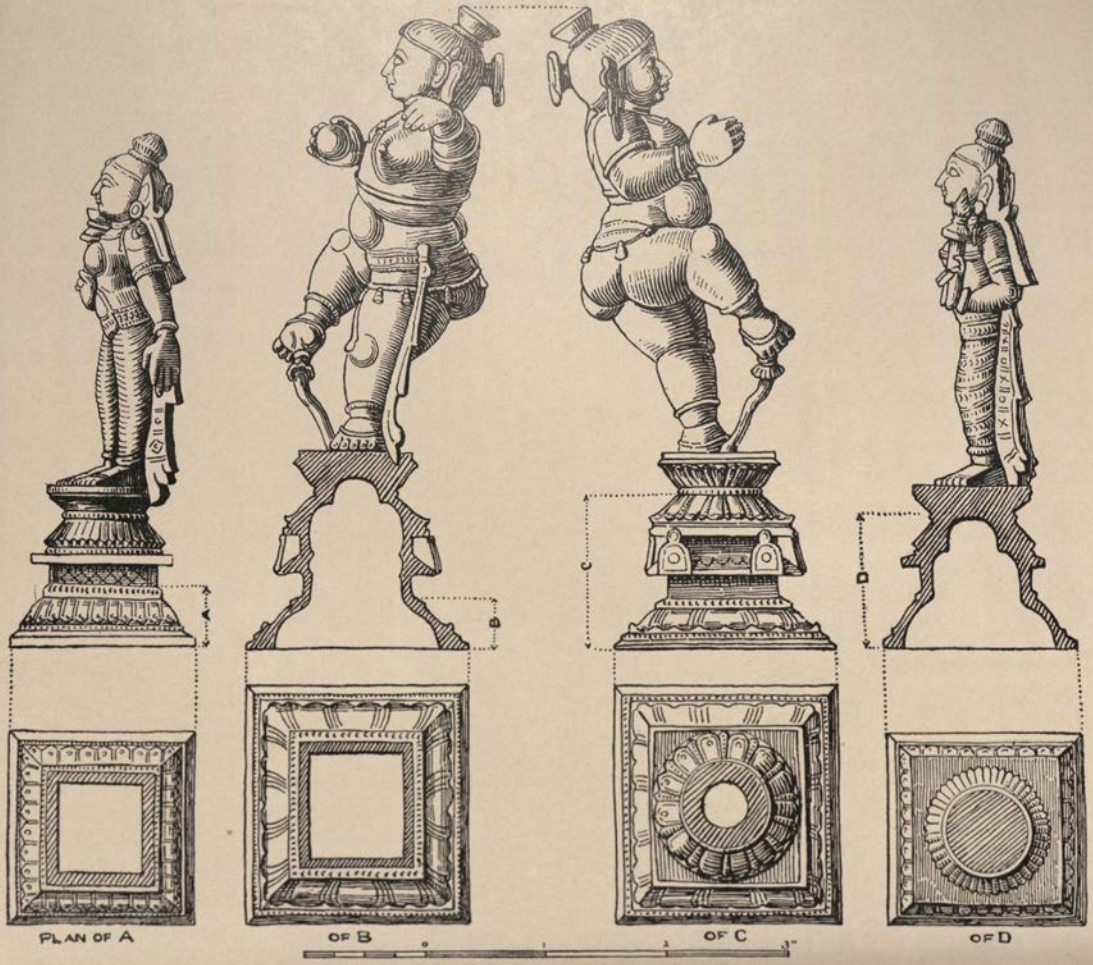


Fig. 31-a.

Fig. 31-B.

The side views and base plans of the preceding figure of Krishna shewn in this plate is eloquent of a disregard for balance not uncommon in standing figures of South Indian gods.

The common European rule that a vertical line dropped from the chin should pass through the heel, proves properly in the full face view, but is far outside in the side view.

Being of metal and with a heavy base the figure actually keeps upright, but viewed from the side it is apparently most unstable, and consequently unpleasantly restless.

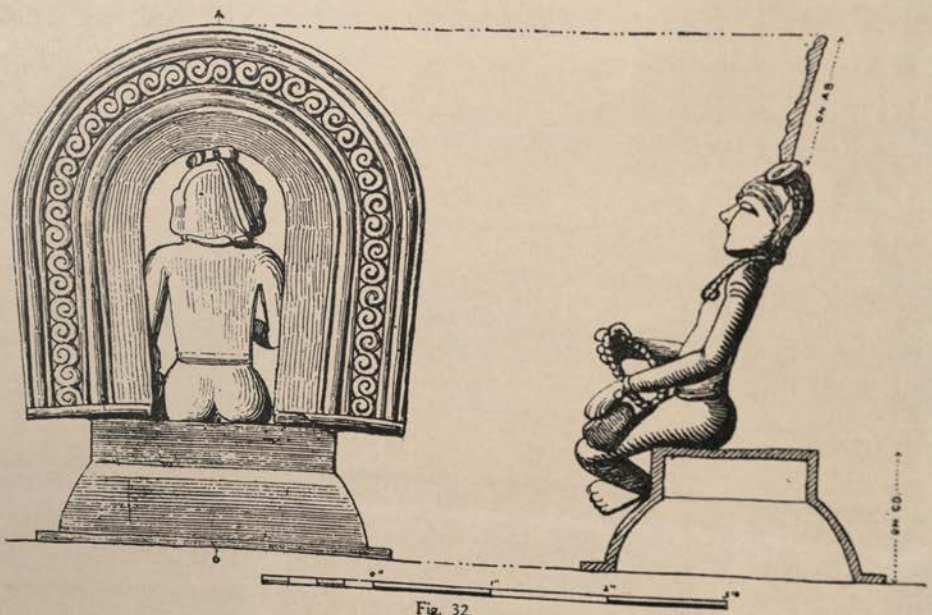


Fig. 32.

Fig. 32.

This very crudely modelled Saivaite figure is cast in brass, which is somewhat unusual in figures found in South India.

It probably represents a rishi, and quite probably is of northern workmanship.

The great economy of material is noticeable, the figure being particularly thin and flat.

It is in the Government Museum.

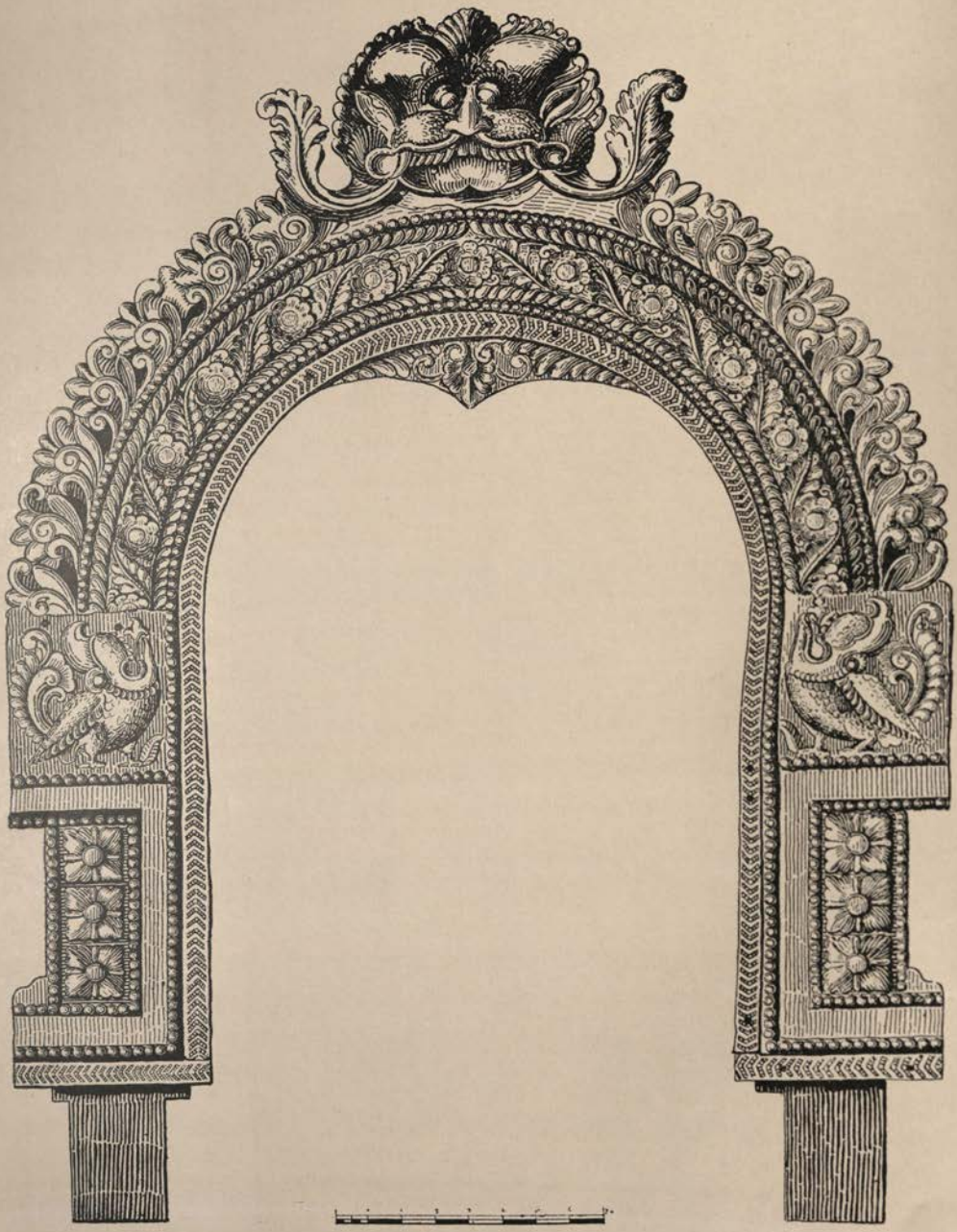


Fig. 33.

Fig. 33.

This hammered brass back-piece for a shrine is made up of thin sheets of metal decorated with repousse work, fastened on to a wooden frame.

These shrine backs, though of smaller dimensions and different forms, may be observed in the preceding examples of complete groups of gods.

Though there is no arch used as a structural feature in pure Hindu architecture, it is often used in one form or another decoratively, when no other architectural member, to support, occurs above it.

The method of decorating by thin sheets of embossed metal is very common in South Indian work of large dimensions, such as the example under discussion and in such articles as the huge vehicles for the gods seen in so many temples.

The foundations are of wood and the fastening of the metal plates to the wooden back is almost invariably in a careless and slipshod manner, even fine silver and gold plates may be seen fastened to their wooden foundation with common tin tacks.

In nearly all small examples of metal objects with decoration in relief, casting is resorted to instead of repousse work, so it is generally difficult to find any examples of old work of a small size with repousse decoration.

The decorative motifs in this example are mostly floral, except for the "sea monster" birds at the spring of the arch and the lion's head at the top.

The specimen is in the Government Museum.

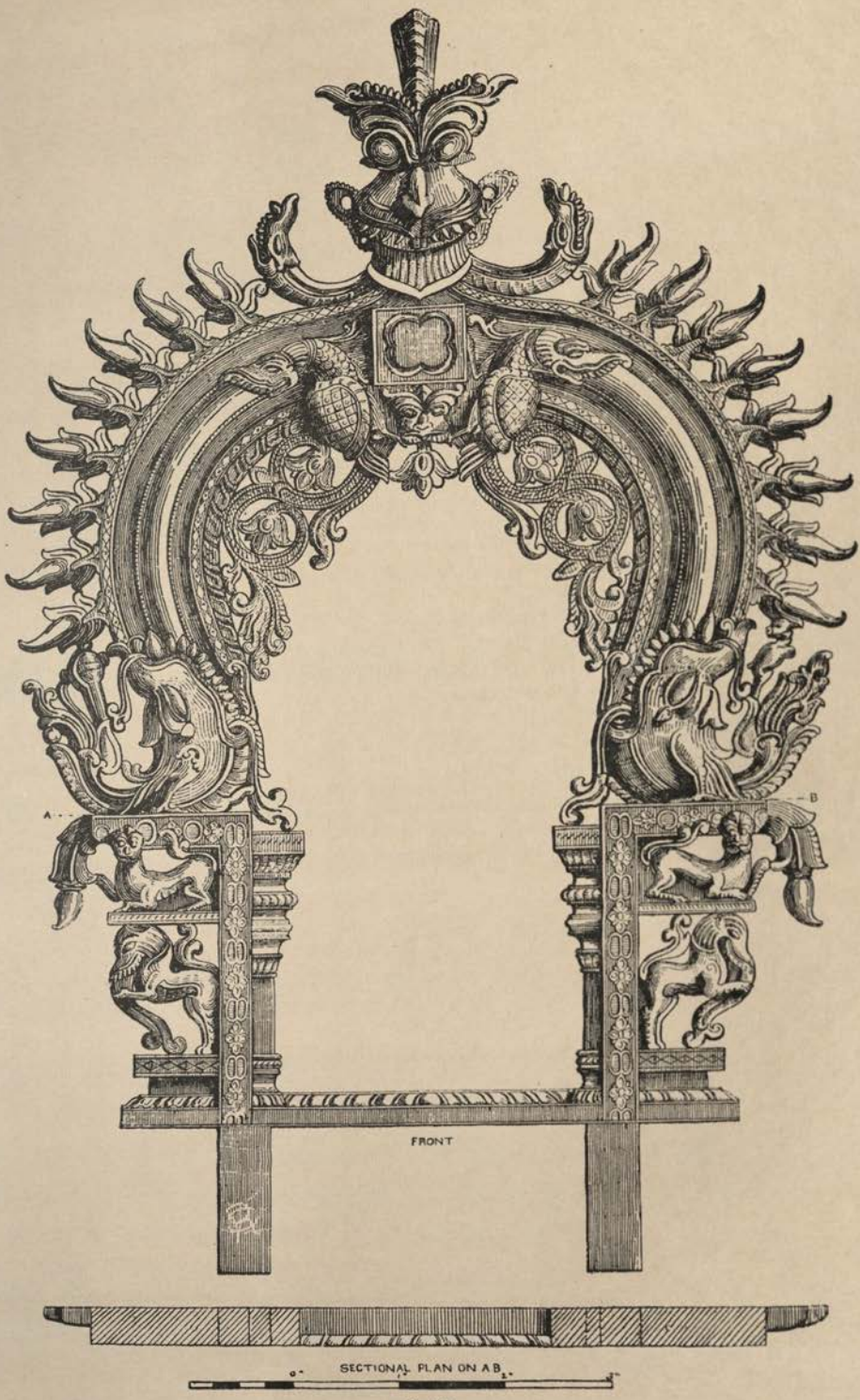


Fig. 34.

Fig. 34.

A cast brass shrine back of great elaboration, and excellent finish, intended probably for an image of Siva.

This fine specimen shews a great variety of Hindu motifs particularly well used.

Beginning at the base and following around the arch the names of the various motifs are:

Yali (an animal with a lion's body and elephant's head); a lion; a "sea monster" bird with, on the left of the arch, the battle axe (marhu) and on the right a stag (man); at the top of the arch a lion's head and springing from this on each side a neck and head of a sea monster; the two birds below on the under side of the top of the arch are of the same family as those at the spring of the arch, but in this case the heads are not so large in proportion to the body; between them is another small lion's head, and a scroll ornament grows from their tails; the motif on the very outside of the arch probably represents a flame, as in the similar ornament in figure 27.

Here are collected together many of the principal Hindu decorative motifs, and one sees what a large part the "sea monster" and lion play in Hindu decoration.

The sea monster is identical with the fish that piloted the bark of Satyanata at the time of the deluge.

It probably was originaly evolved from the crocodile.

There is much in common, from the decorative and heraldic point of view, between these fabulous monsters and the common motifs of mediaeval European decoration such as the dragon, the hypogrif, the gryphon and cockatrice to mention but a few.

They are, truly, such animals as are not to be found even in an Indian jungle, but they certainly are expressive and serve their purpose admirably.

The specimen is in the Government Museum.

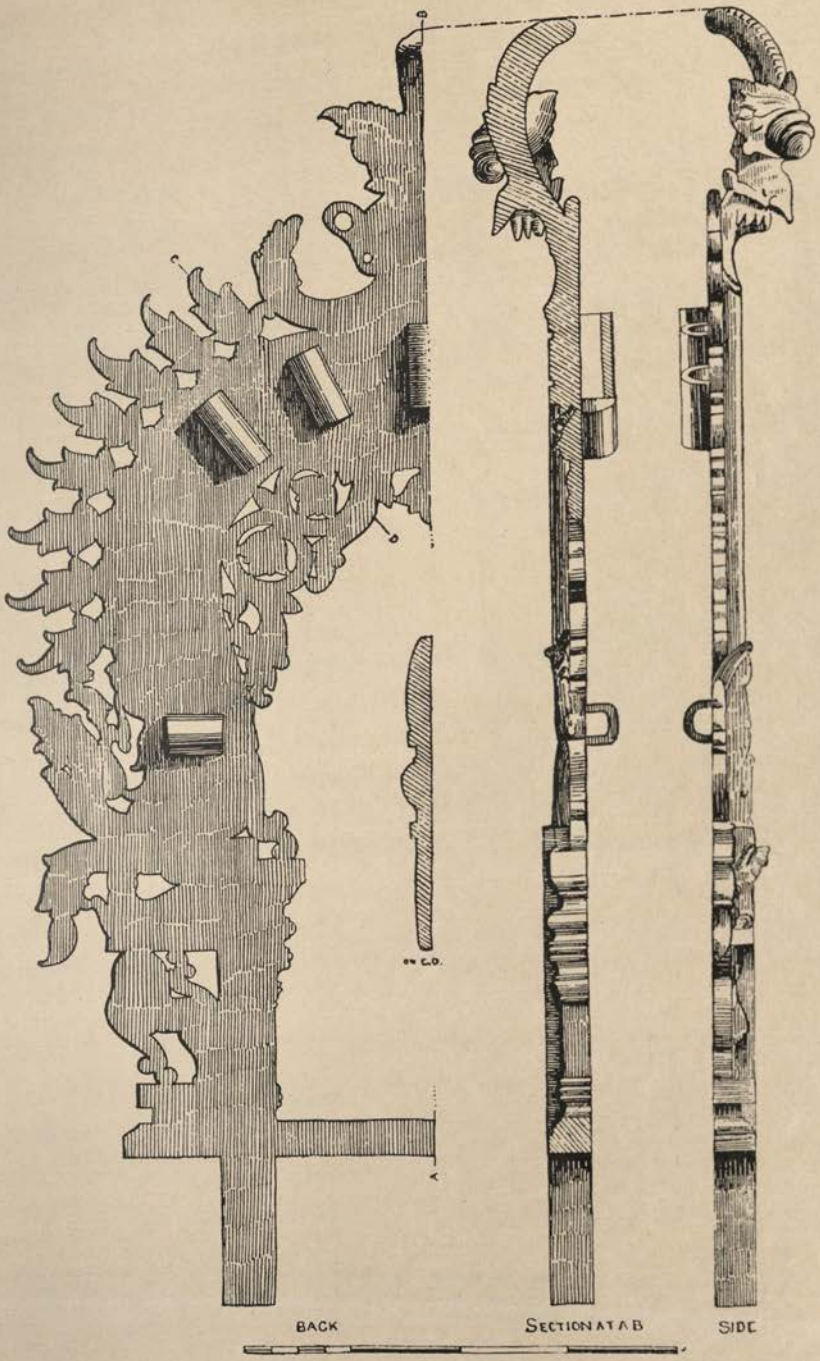


Fig. 34-A.

Fig. 34-A.

This illustration shews one half of the back of the preceding figure with the small rings to hold additional decorations such as flowers or incense sticks; and the side sections of the same.

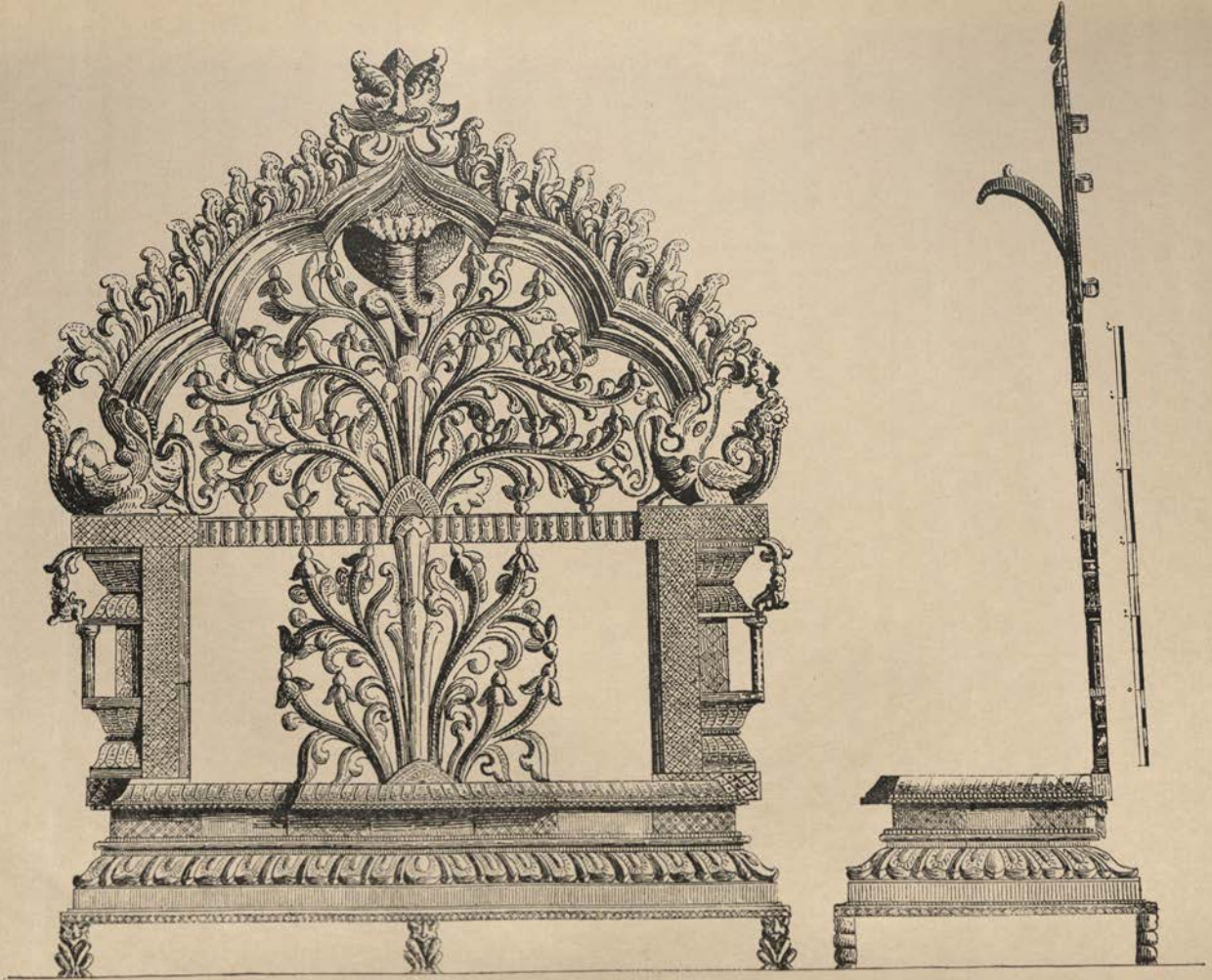


Fig. 35.

Fig. 35.

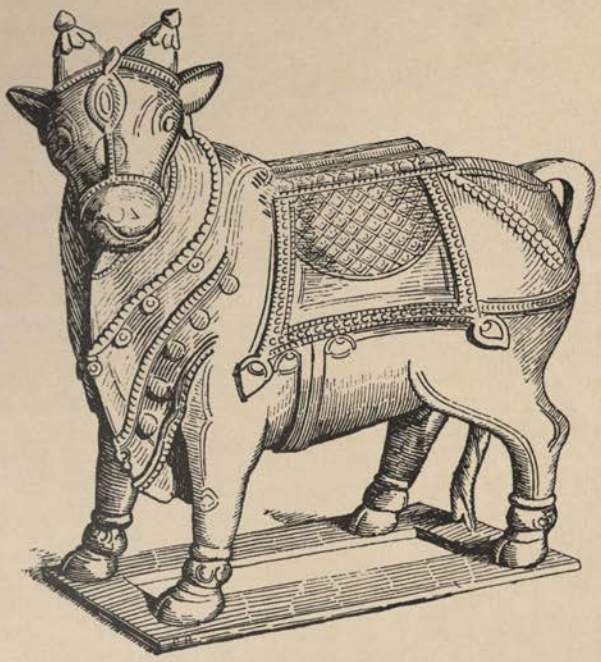
This shrine, complete with the stand below on which the figures of the deities are placed, is intended for a Perumal god.

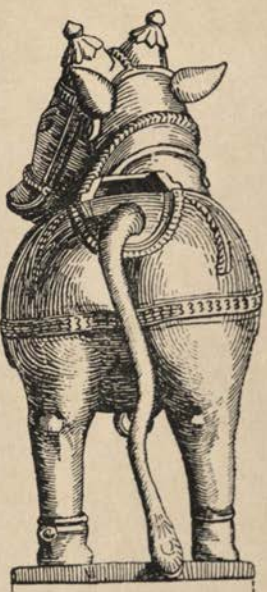
The filling at the back is of a tree pattern very delicately arranged, and in the centre above is a five-headed cobra with the hood and heads projecting, so that it forms a canopy over the god. The stand is supported on lions and these also occur on either side to the right and left of the capitals which support the arch. Similarly, as in figure 34, in this example, on the tails of the birds rest two attributes of the deity.

In this instance, instead of the battle axe and deer, emblems of Siva, there are the chukram and chank, emblems of Vishnu.

The drawing to the right shows the side elevation and the projection of the cobra's hood.

The specimen is of brass and is in the Government Museum.





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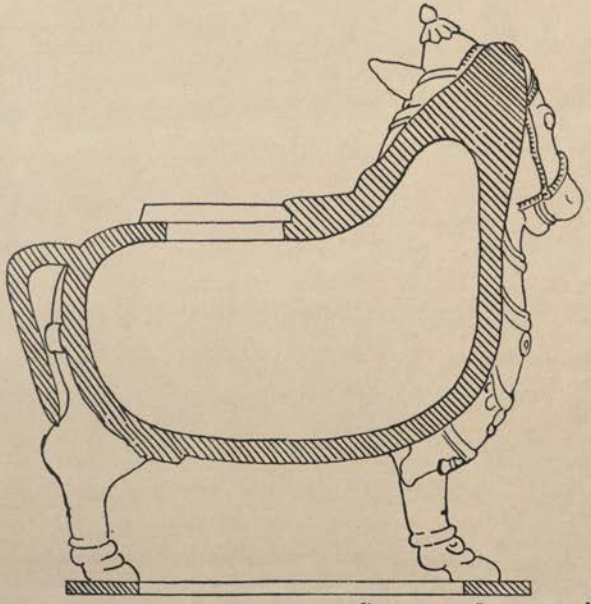


SECTION ON XY

PLAN

Fig. 36.

Fig. 36.

A bull or "nandi" the vehicle of Siva, of cast brass.

The figure of the deity is held in place by the slots prepared to receive it on the top of the bull's back.

There is certainly no animal so frequently represented in one material or another in South India as the bull.

This is a fairly well-modelled example and the ornaments are nicely executed.

It is in the Government Museum.

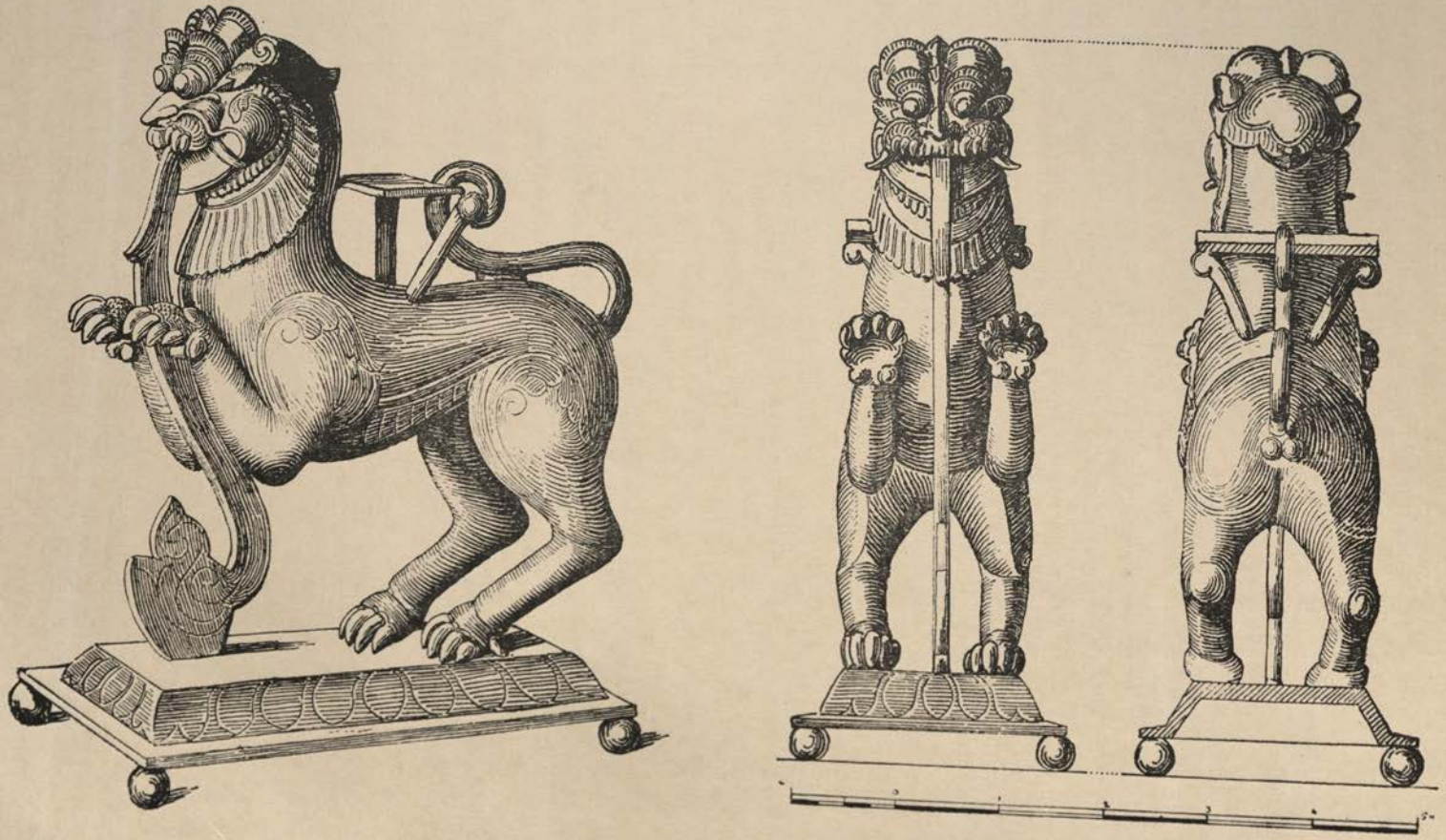


Fig. 37.

Fig. 37.

A cast brass lion, the vehicle of Kali, with a scroll coming from the mouth, as a support.

In this example there is a little raised platform above the back on which to place the figure of the deity.

Looked at from the anatomical point of view, there is, perhaps, not much in common between this lion and the real article, but there is very much to be said in its favour, for, like mediaeval lions in Western art, it probably conveys a much greater degree of leonine ferocity, power and strength, to the beholder, than any purely naturalistic rendering could ever do.

A lion in captivity, which would be the way in which most persons, if they saw one at all, would see it, certainly conveys to one's mind great dignity and a considerable amount of strength, but that such a gentle looking beast could display any remarkable ferocity is not so easily understood.

It was probably for this reason partly, and partly from its unfamiliarity to the artist called upon to represent it, that the lion, and especially the lion's head, has, in decorative art, undergone such changes from nature.

It is well also, to understand, that it is perhaps more for edification than as a literal transcript of nature that decorative animals are used.

The head of this example follows the usual traditional South Indian forms, with bulging eyes, projecting teeth with a tusk on each side, and a somewhat human nose.

The cast is in the Government Museum.

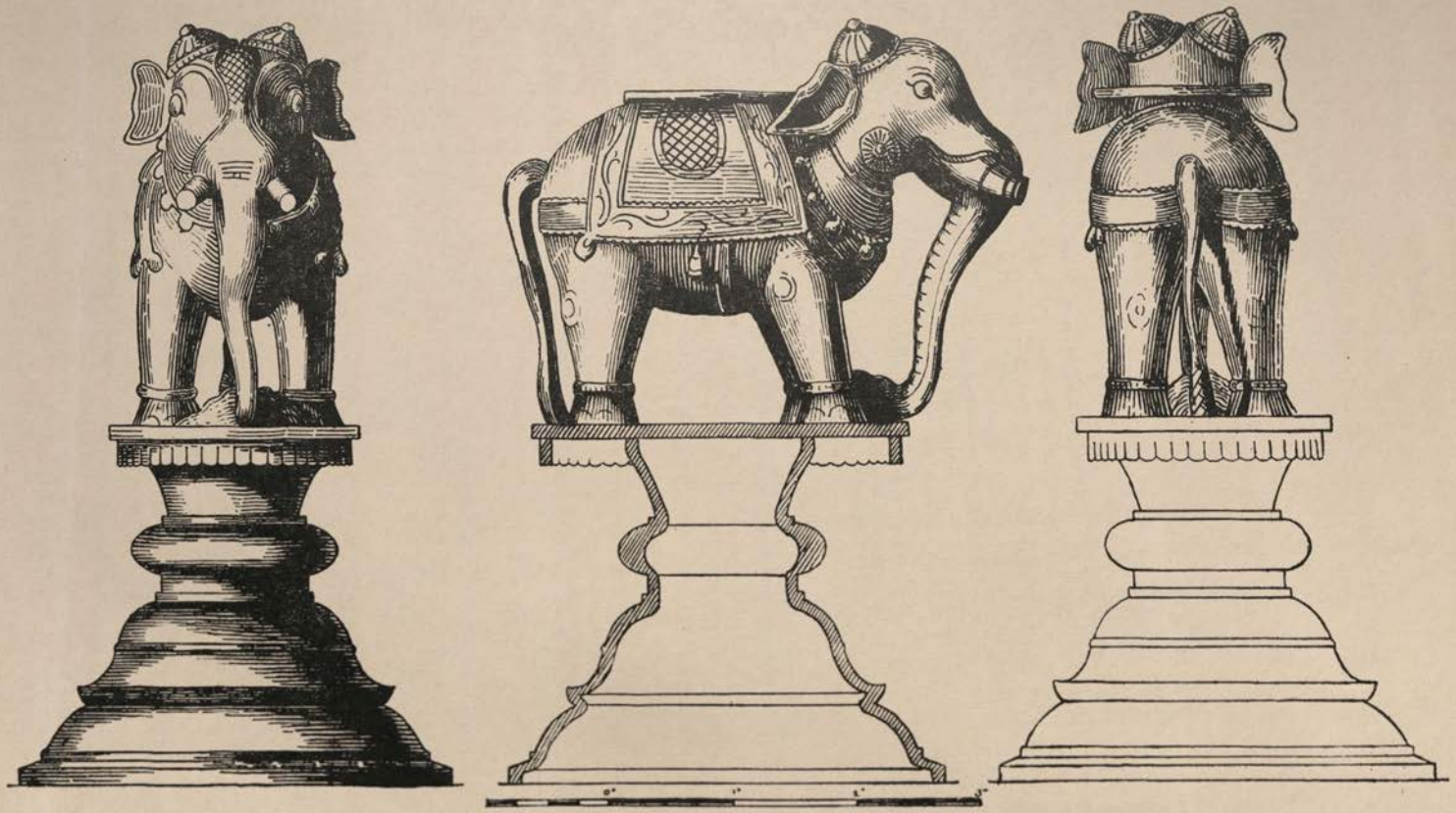


Fig. 38.

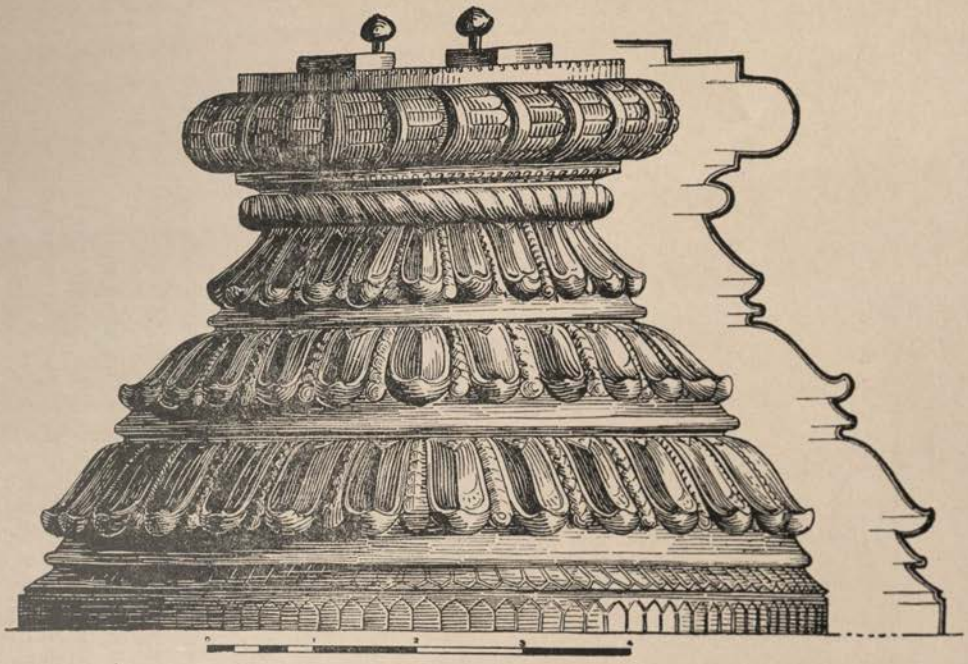
Fig. 38.

This cast brass elephant, the vehicle of Indra, is not a very fine specimen.

In the preceding example, the great liberties which are taken by the decorative artist in representing the lion were pointed out and the reasons stated; with the elephant, however, another sort of liberty is taken, but this, generally, is not such a wide departure from nature as in the previous case.

The trunk and tail are somewhat elongated, which helps considerably to make the model a trifle easier to cast.

The specimen is in the Government Museum.



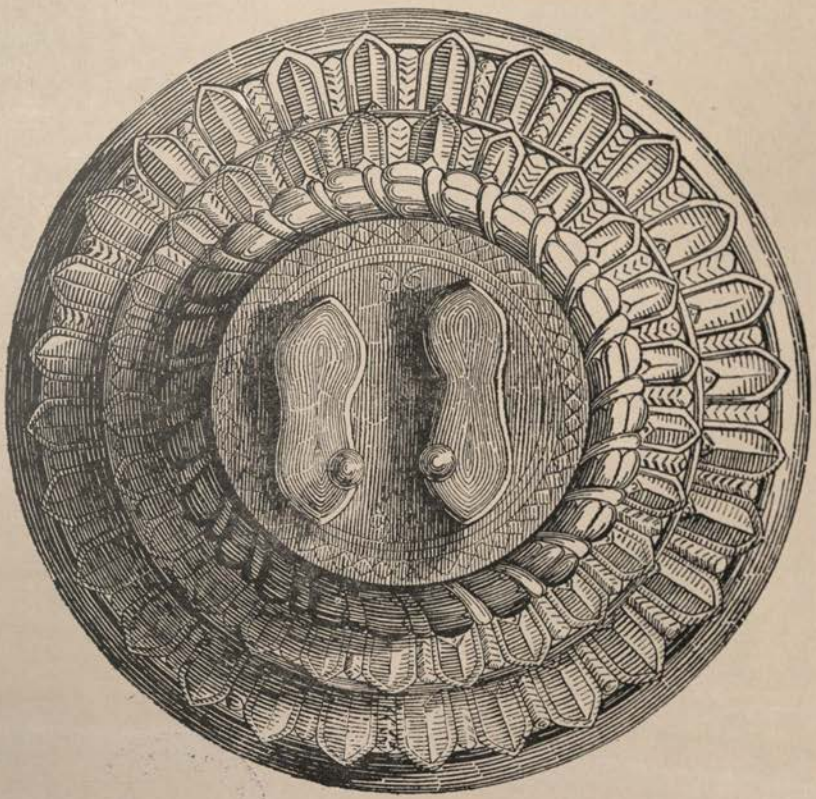


Fig. 39.

Fig. 39.

This object, somewhat like a hollow truncated cone, is used in temples, and is placed over the head of the devotee by a priest.

The name in Tamil is "Shadagopam".

It is used in temples of both sects but mostly by Vaishnavas.

On the top is represented a pair of sandals and the idea conveyed by its use is that the feet of the deity rest on the devotee's head.

It is made of hammered copper and is in the Government Museum.

THE ASIATIC SOCIETY OF BOMBAY

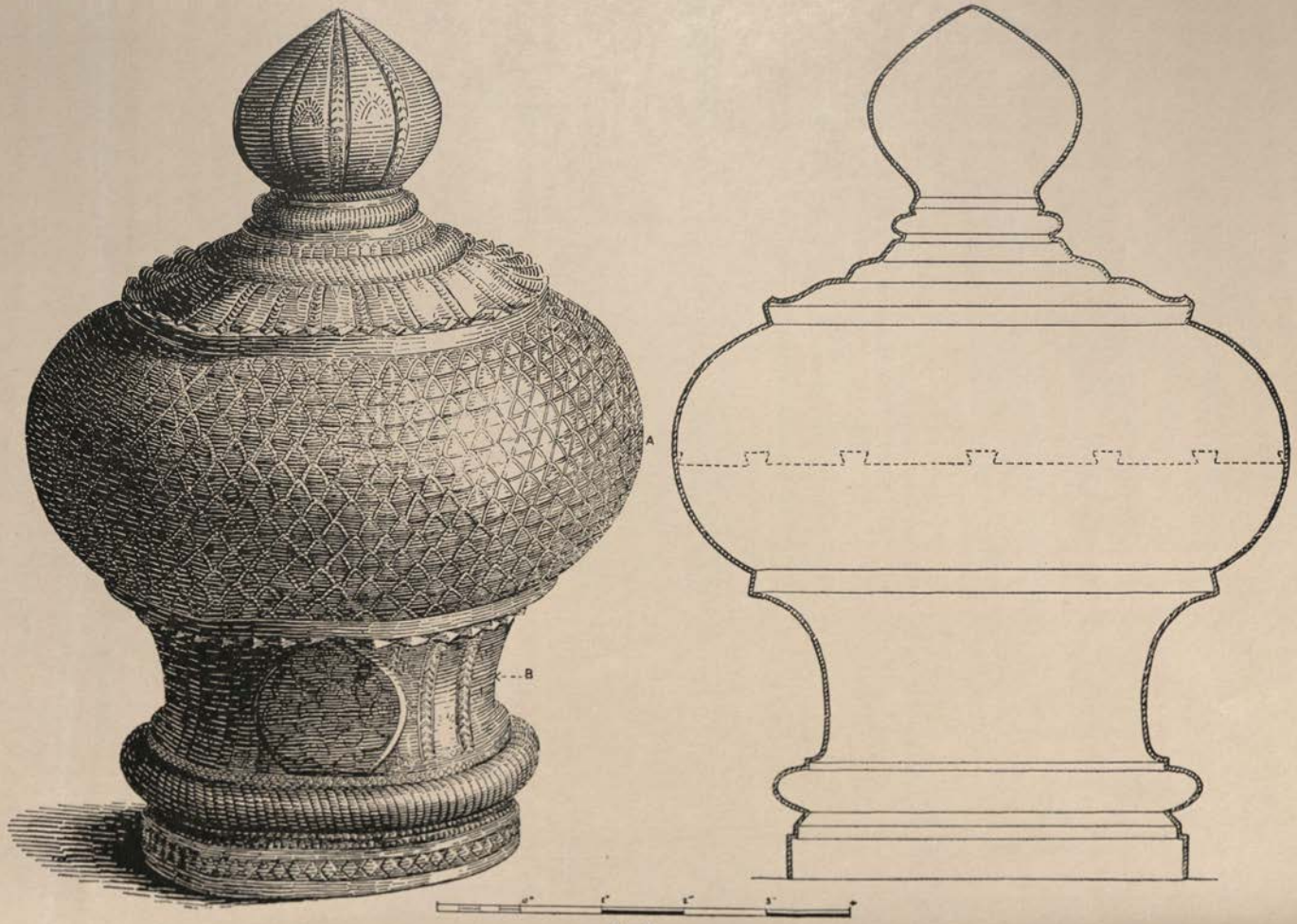


Fig. 40.

Fig. 40.

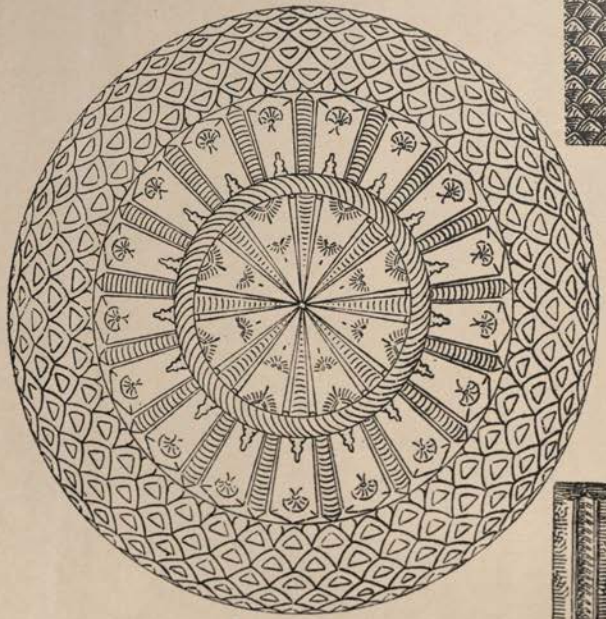
This copper crown is used for placing on the head of Perumal god.

The decorative motif throughout is that of the lotus.

The scale pattern used to decorate the bulging part of the crown, probably represents the thousand petaled lotus sacred to the gods, and the topmost part, a lotus in bud.

The delicate and graceful outline of the mouldings and section are well shewn in the sectional drawing.

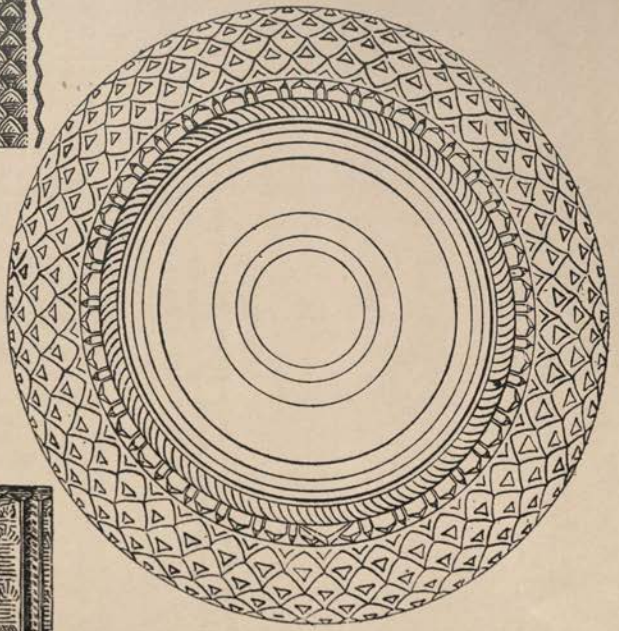
It is in the Government Museum.



PLAN FROM TOP

DETAIL OF A

DETAIL OF B



PLAN FROM BOTTOM

Fig. 40-A.

Fig. 40-A.

These drawings show the plan, top and bottom, and details of the crown illustrated in the preceding figure.

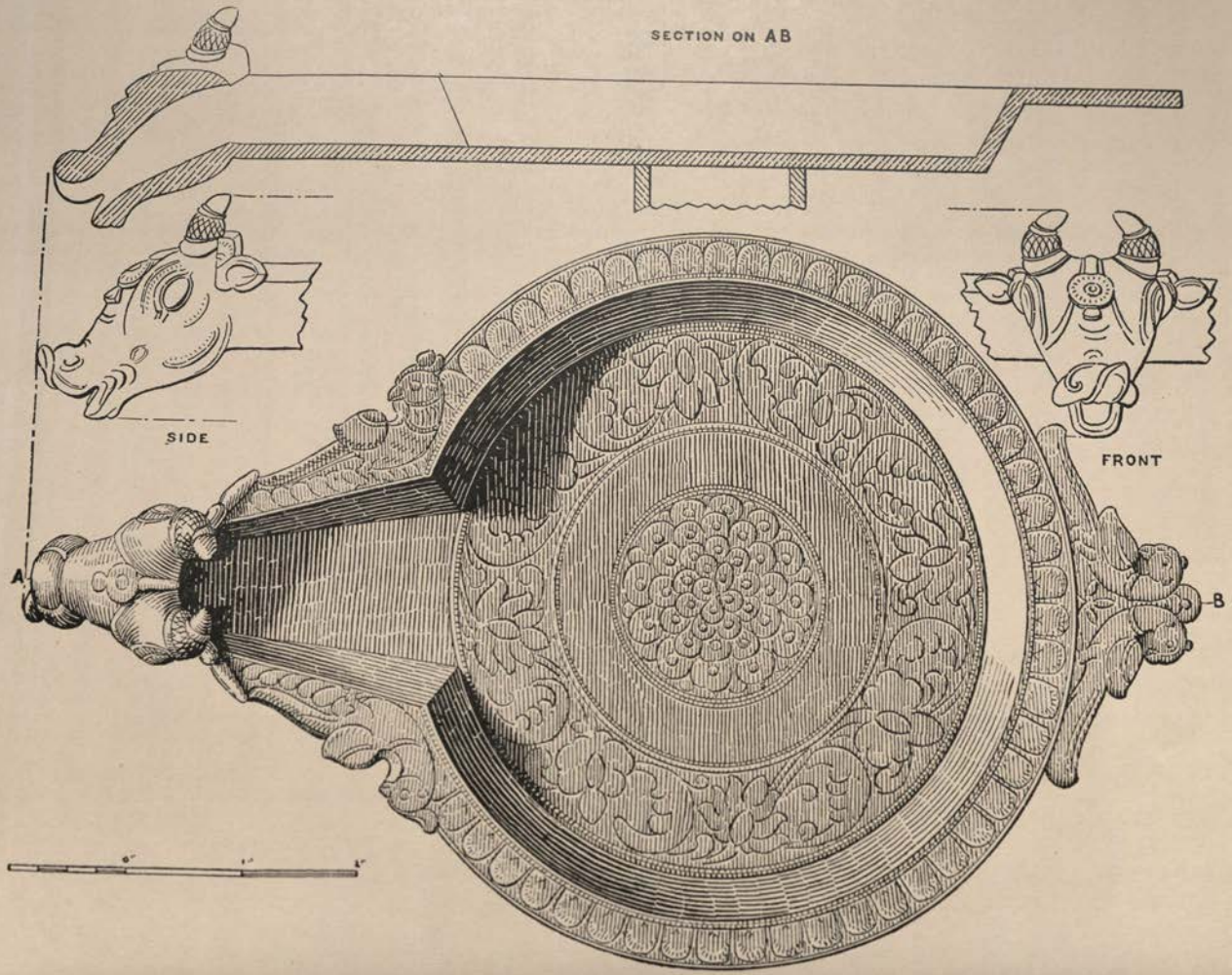


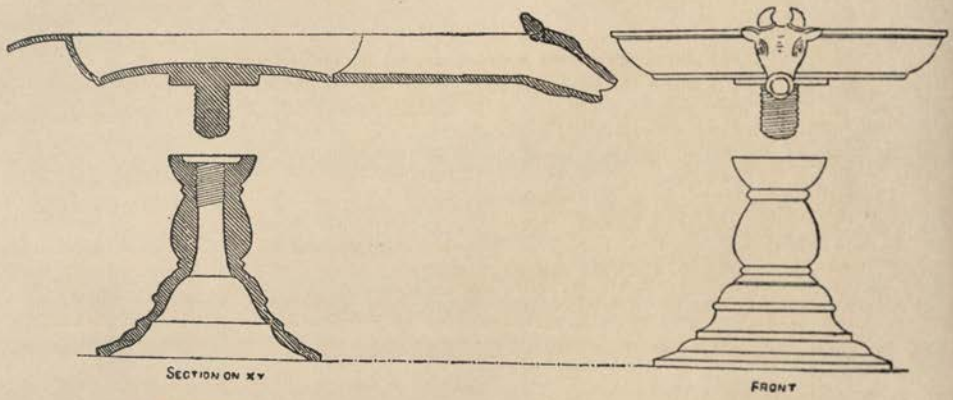
Fig. 41.

Fig. 41.

A brass dish called a "peedam" used in oblations. The lingam is placed in the centre of the dish and it is then laved with the sacrificial liquid, which escapes through the spout which is fashioned in the form of a bull's head.

It is used by Saivites.

This specimen is from the Victoria Technical Institute.



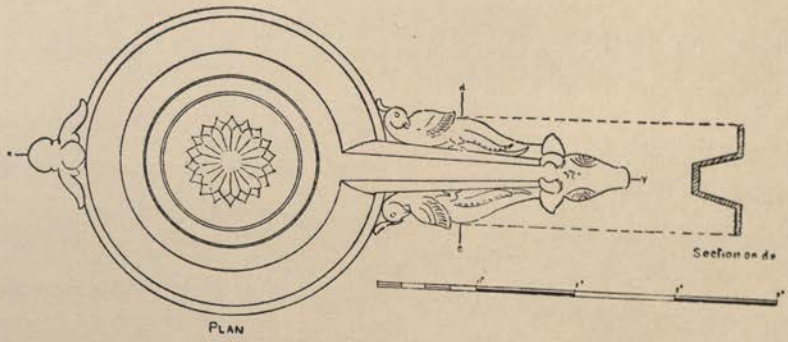
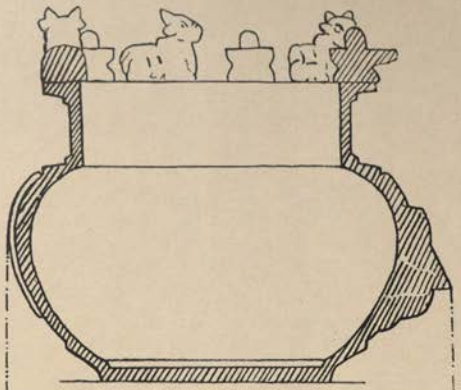


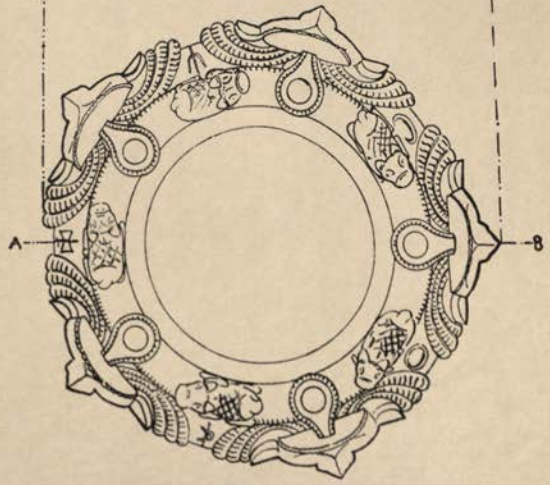
Fig. 42.

Fig. 42.

This dish, similar to the preceding one, has the addition of stand. It is in the Government Museum.



Section on A.B.



PLAN

Fig. 43.

Fig. 43.

This brass pot and the two following examples are used to contain curds or water when deities are being worshipped.

The rim is decorated with bulls and lingams, alternating, and the sides of the pot with masks of asuras. It is used by Saivites.

The three examples are all in the Government Museum.

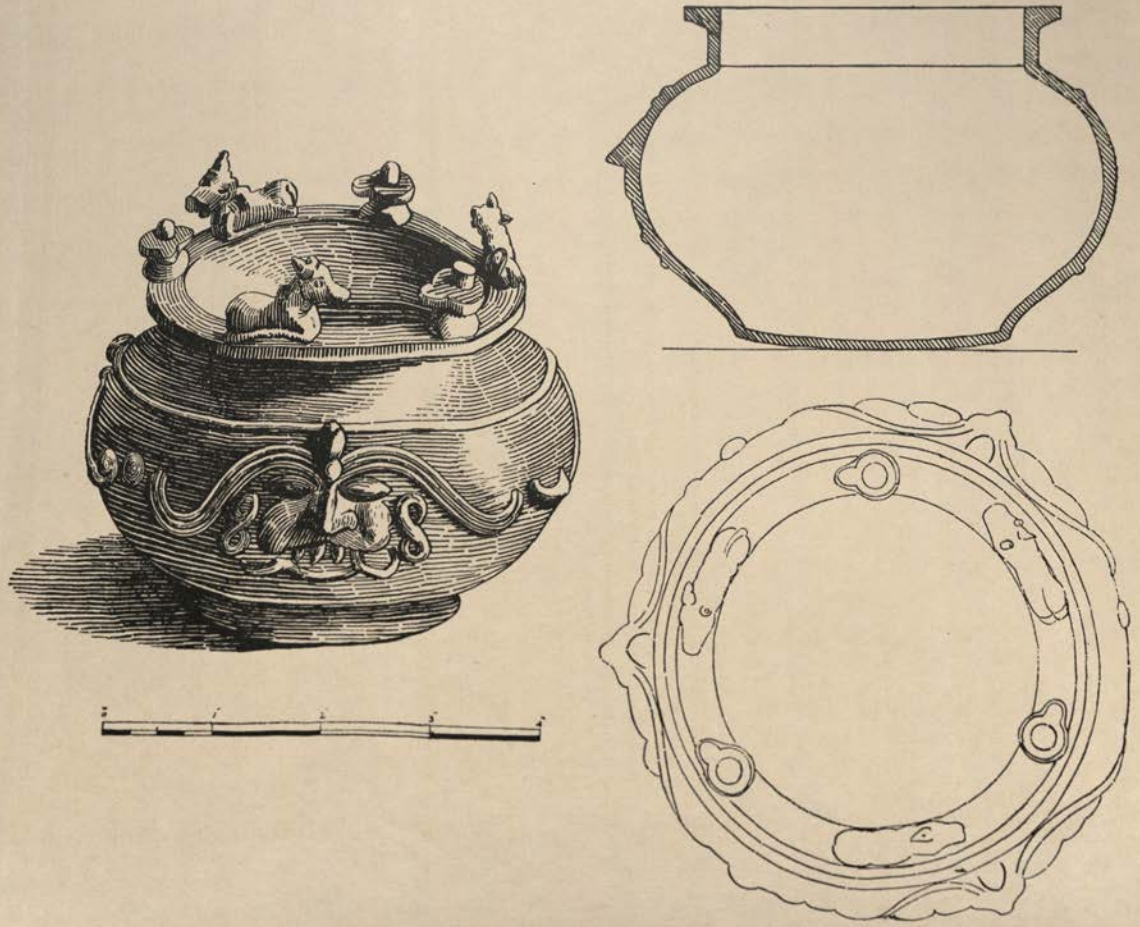


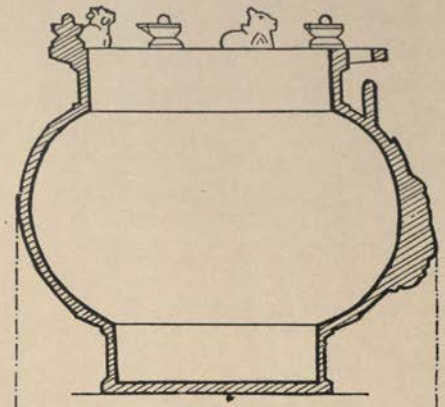
Fig. 44.

Fig. 44.

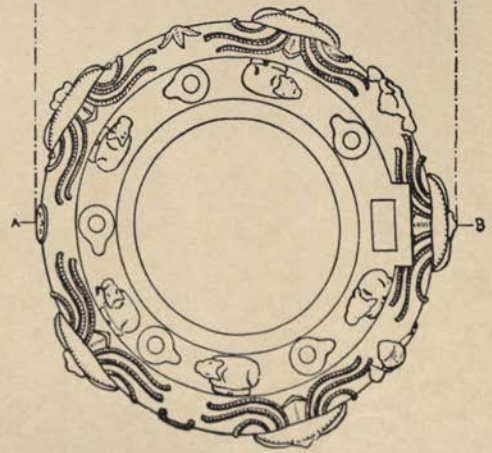
A somewhat less ornate example of the same class of utensil as the preceding and following ones.

Lion's heads take the place of the masks shown in the other examples and there are symbols of the Sun and Moon also.

These utensils are always made of brass, very heavily fashioned, though often with much carefully worked detail.



SECTION ON AB.



PLAN

Fig. 45.

Fig. 45.

This specimen is the most elaborate of the three illustrated.

There are two figures of deities, Ganesa and another between the masks, besides the Sun, Moon and trident.

There is also an aperture in the rim to receive a further enrichment, probably a naga or serpent.

Fig. 46.

Fig. 46.

A "Sthali" or pot for ablutions, or for purposes of worship.

It is a common form both in Northern and Southern India and is used by Hindus.

This is a larger and more ornamental specimen than is usually to be met with.

Its likeness to a common form of teapot, excepting the lack of handle and cover, is very noticeable.

These are generally made of copper.

The specimen is in the Government Museum.

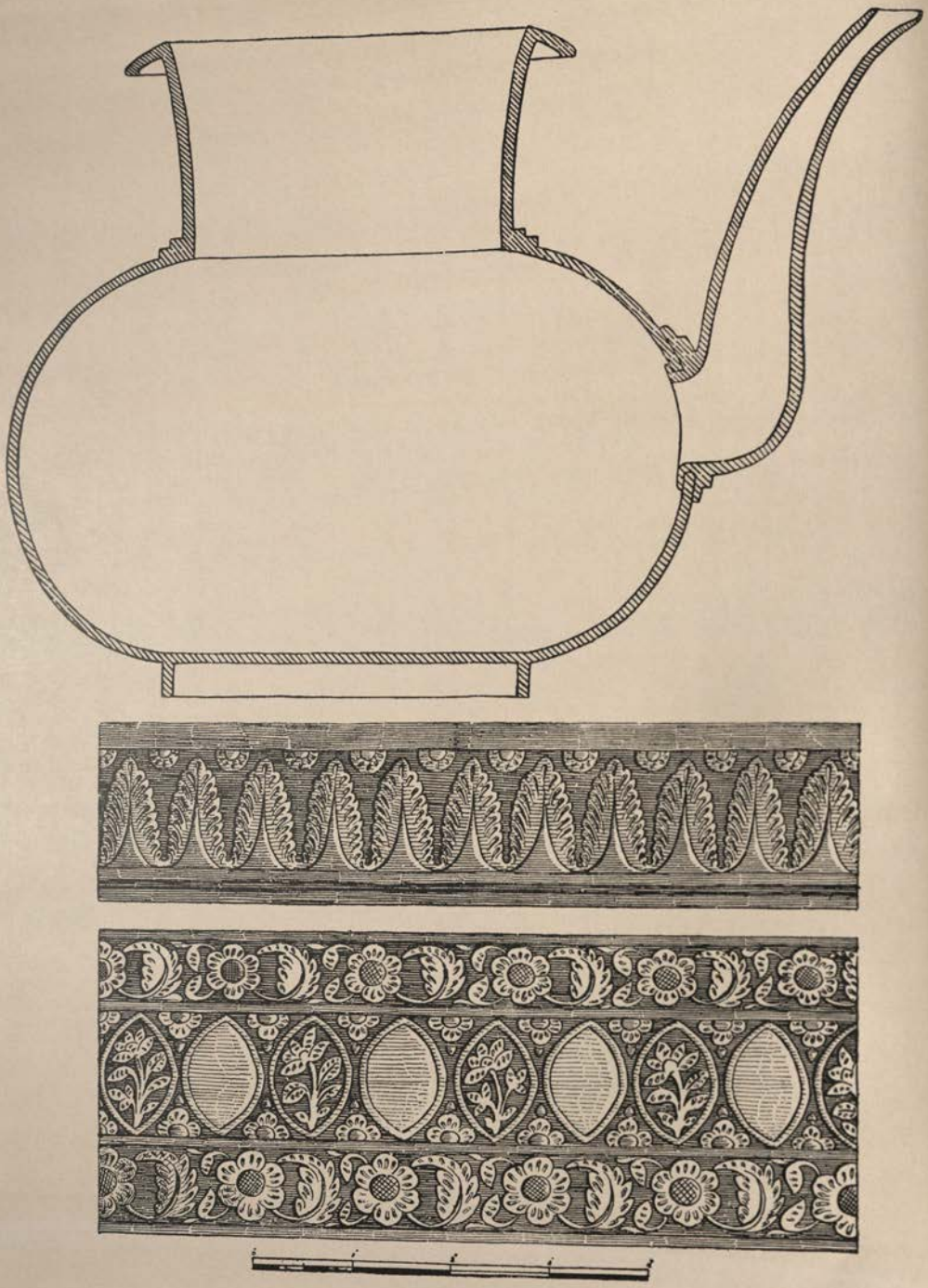


Fig. 46-A.

Fig. 46-A.

The section of the preceding sthali, together with the details of the ornament, are here shown nearly full scale.

Figs. 47 & 48.

Figs. 47 & 48.

Of these two brass pots, that on the left is a very common form of small chembu, and the decoration of "hamsas" or swans alternating between floral motifs is a favourite pattern.

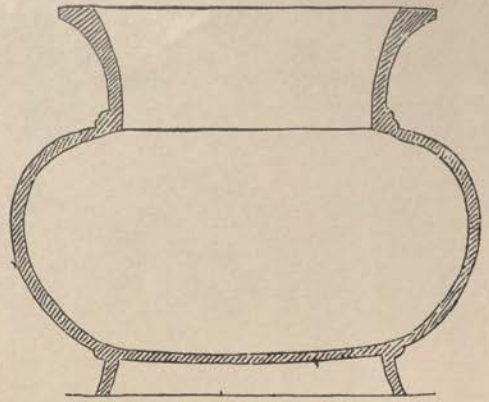
The other, covered pot, is used for incense. The covers often being perforated, but in this example it is solid.

Both specimens are in the Government Museum.

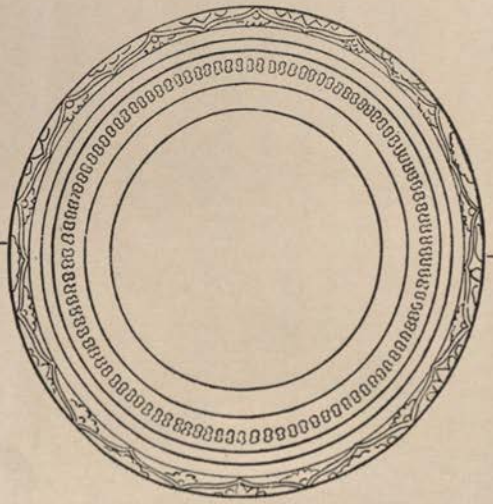
Fig. 49.

Fig. 49.

A large brass chembu decorated with an interchanging half-ogee pattern.
It is somewhat coarse in workmanship but rich and effective.
It is in the Government Museum.



Section on AB



Scale of Inches

Fig. 50.

Fig. 50.

A common form of wide-mouthed chembu with a supporting rim at the base.

The decoration shows traces of Mussalman influence in the panelling of the band, and the separate floral motifs.

It is in the Government Museum.

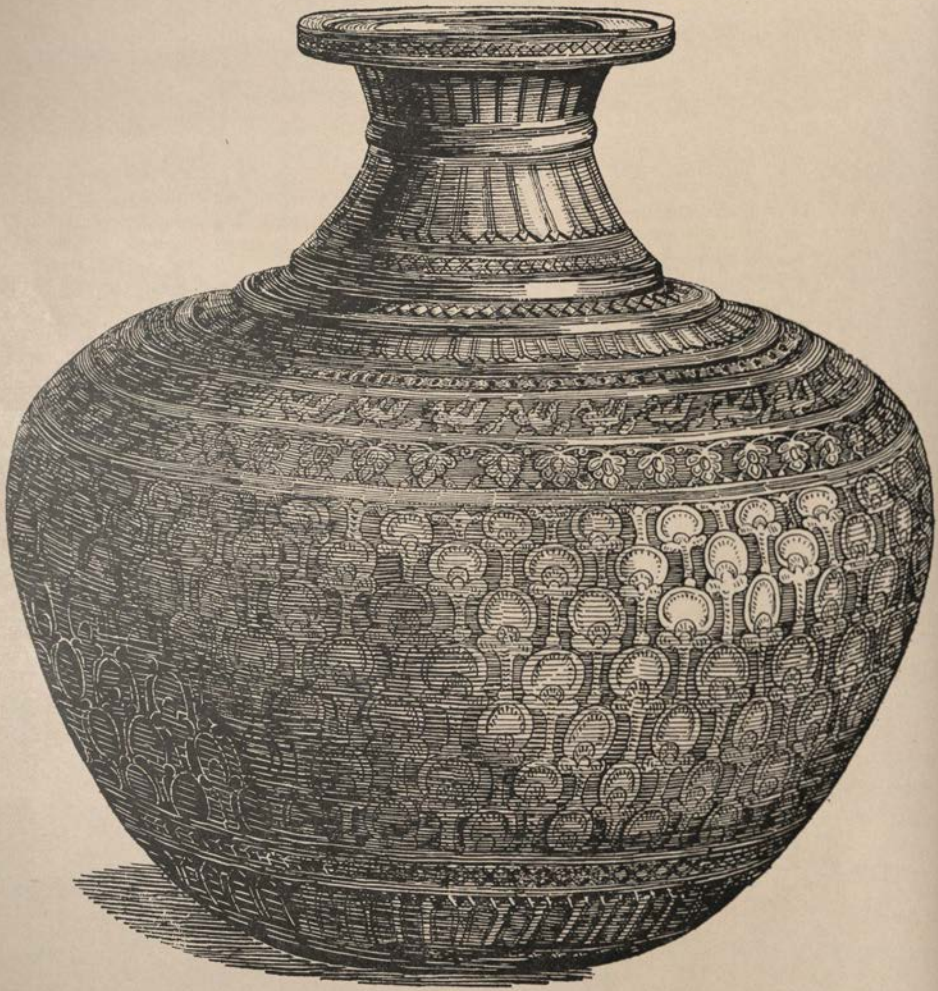


Fig. 51.

Fig. 51.

A hammered brass kudam encrusted with copper.

This very fine example of the older method of encrusted metal-work, unlike the modern examples for which Tanjore has an unenviable notoriety, is probably an unique example.

Specimens of the old method, in which the surface decoration is kept quite flat, are, or have been up to the last year or two, extremely rare.

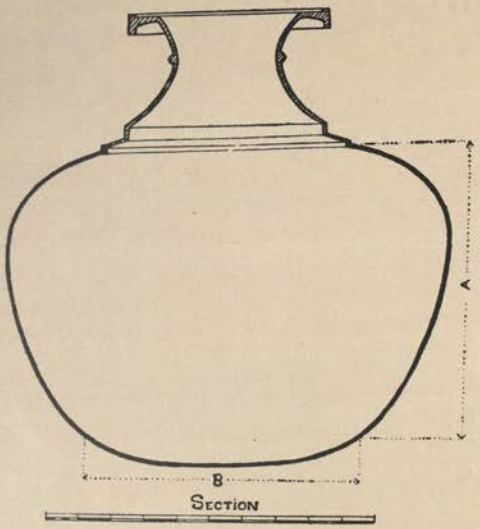
The surface of this specimen is closely covered with a pattern of conventionalized peacock's feathers and narrow borders of swans and floral motives, in copper. The pattern is slightly elaborated by incised lines but the whole outline of the surface of the vessel is in no way disturbed by any work in relief.

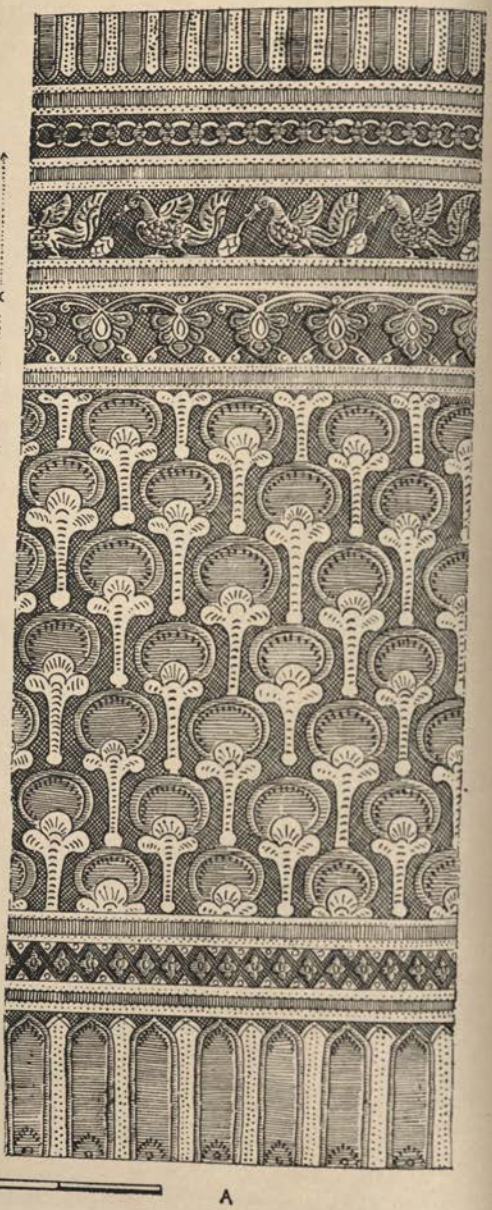
The process cannot strictly be called inlaid work as the superimposed metal is of very thin substance appliqued and fastened along its edges by being hammered into a chiselled groove made to receive it.

The groove is so cut at an angle, with a slight burr that the edge of the thin overlaid piece is held securely in place, in exactly the same way that a "paved" or burnished stone setting is constructed and worked.

The process is infinitely less laborious than demasceneing and much more secure and of better wearing qualities than Bidar work (or Koftgari). The specimen belongs to Mr. Napier of Bangalore, and came originally from the palace at Tanjore.

For some reason which it is almost impossible to follow, the modern Tanjore workmen will seldom fashion their wares by this older method of keeping the surface undisturbed by any protruding excrescences. The modern method is thoroughly bad from every point of view, both wearing qualities, artistic and decorative effect, and good workmanship, are all sacrificed to the tawdry and vulgar catch-penny result so well achieved and apparently so fascinating to the person of uneducated taste.





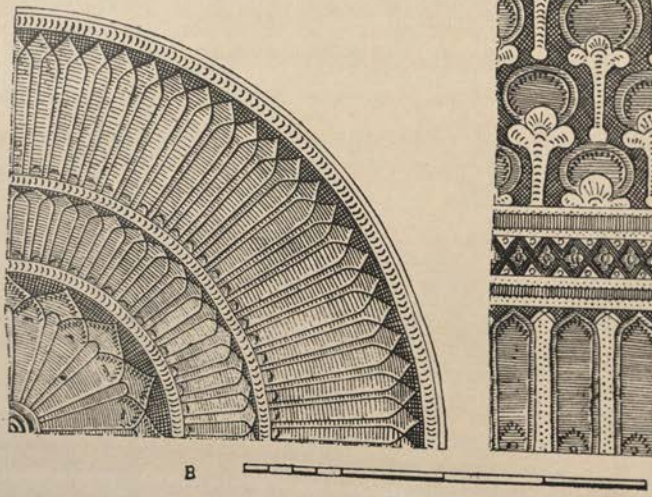


Fig. 51-A.

Fig. 51-A.

This shows the section of the preceding pot with details of the ornament.

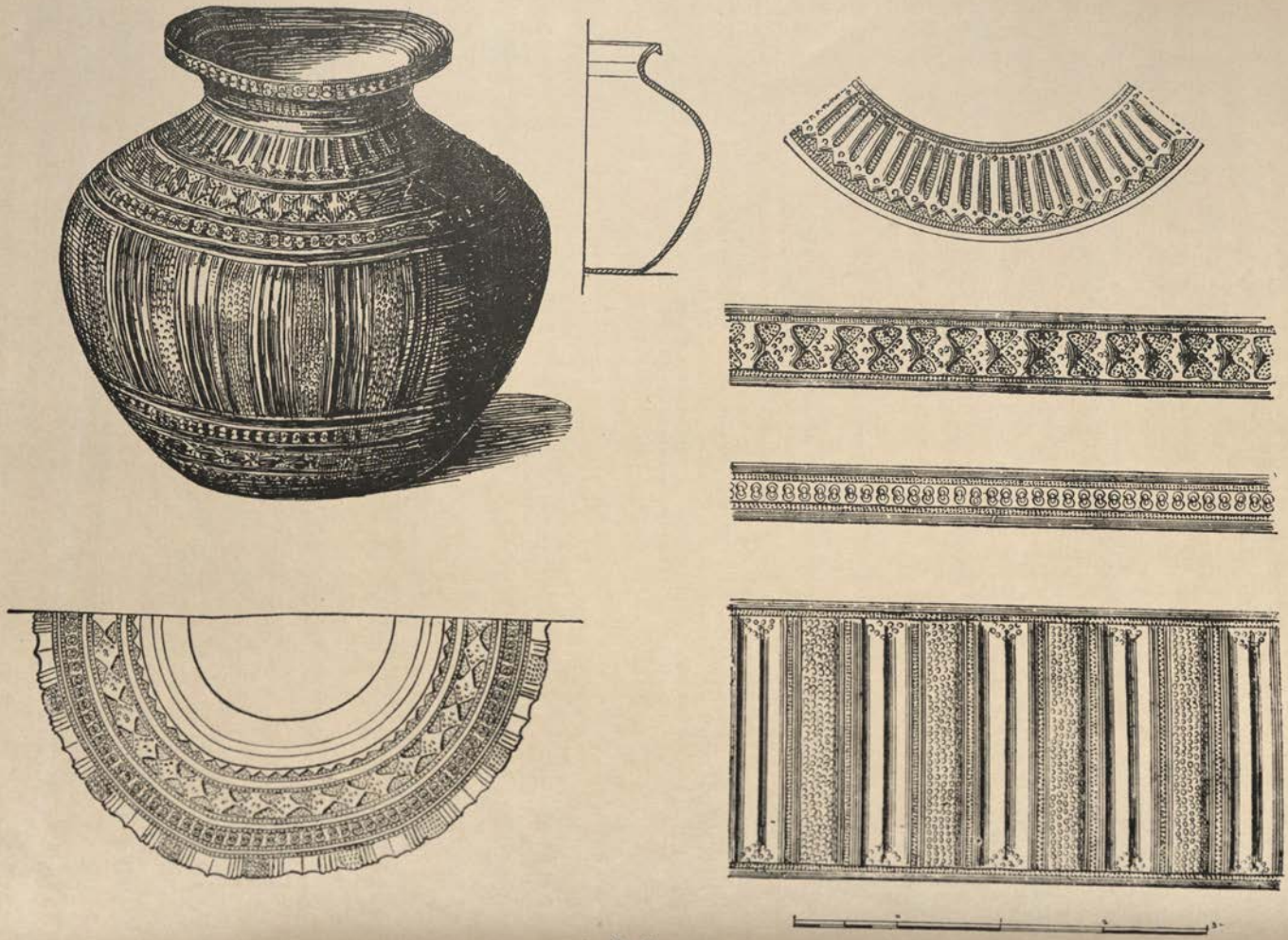


Fig. 52.

Fig. 52.

A cast brass chembu decorated with a pattern made up of various small dots, rings and lines.

It is a remarkably good example of this sort of work; a minimum number of tools used with a maximum amount of effect.

The body of the vessel is decorated with alternate panels of ridges running vertically and the spaces between are filled with small rings and dots. This gives the required contrast of a somewhat mat surface, with the shining plain lines of metal between, bringing out the quality of the material in a high degree.

The specimen is in the School of Arts.

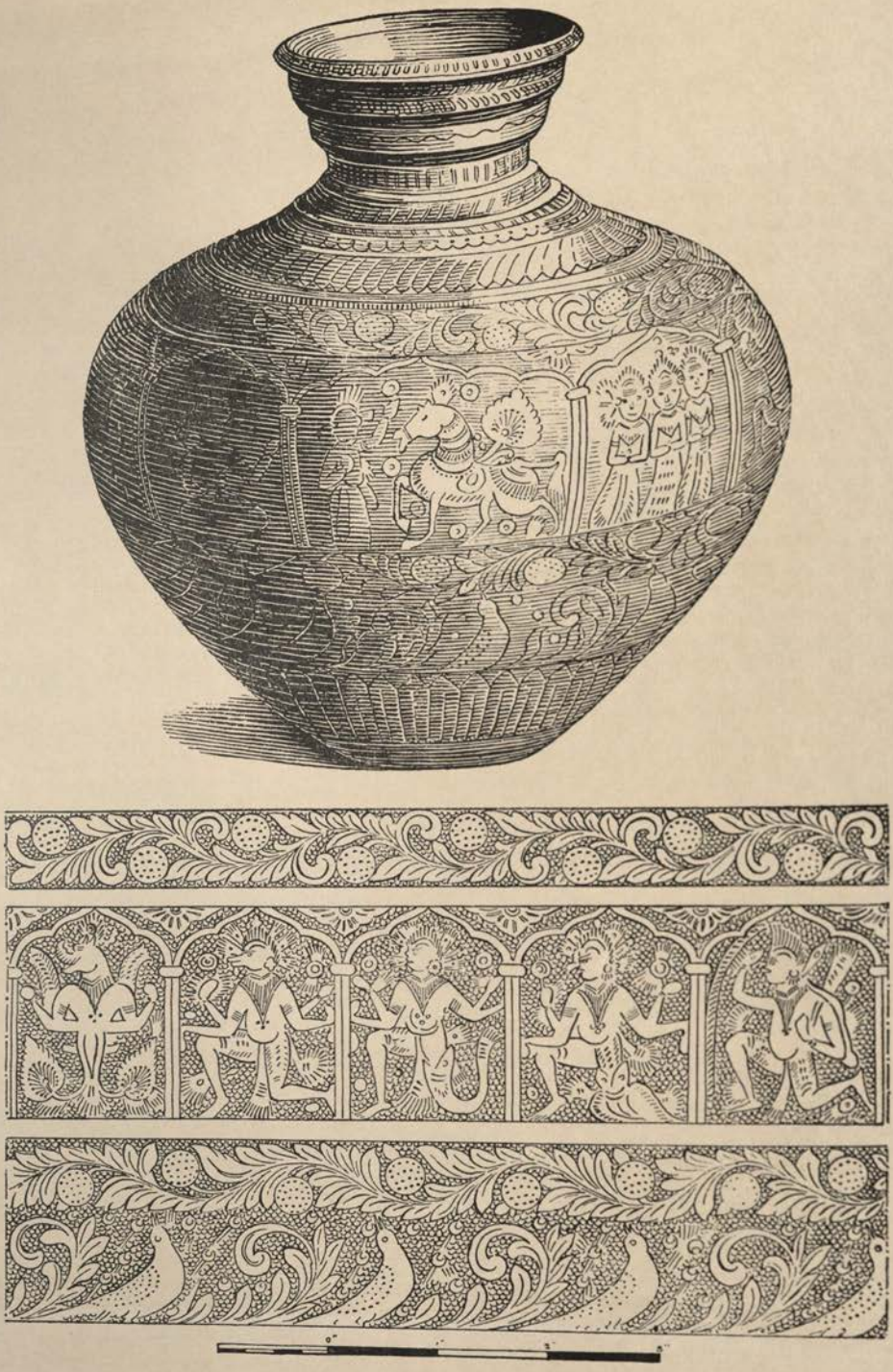


Fig. 53.

Fig. 53.

The details of the ornamentation of this chembu are typical and interesting, if somewhat crude in execution.

It is a common, though decidedly ugly, form. The bands of ornament, consisting of various figures of deities, are incised in outline and the background filled in with a ring tool to give a contrasting surface.

It is in the Government Museum.

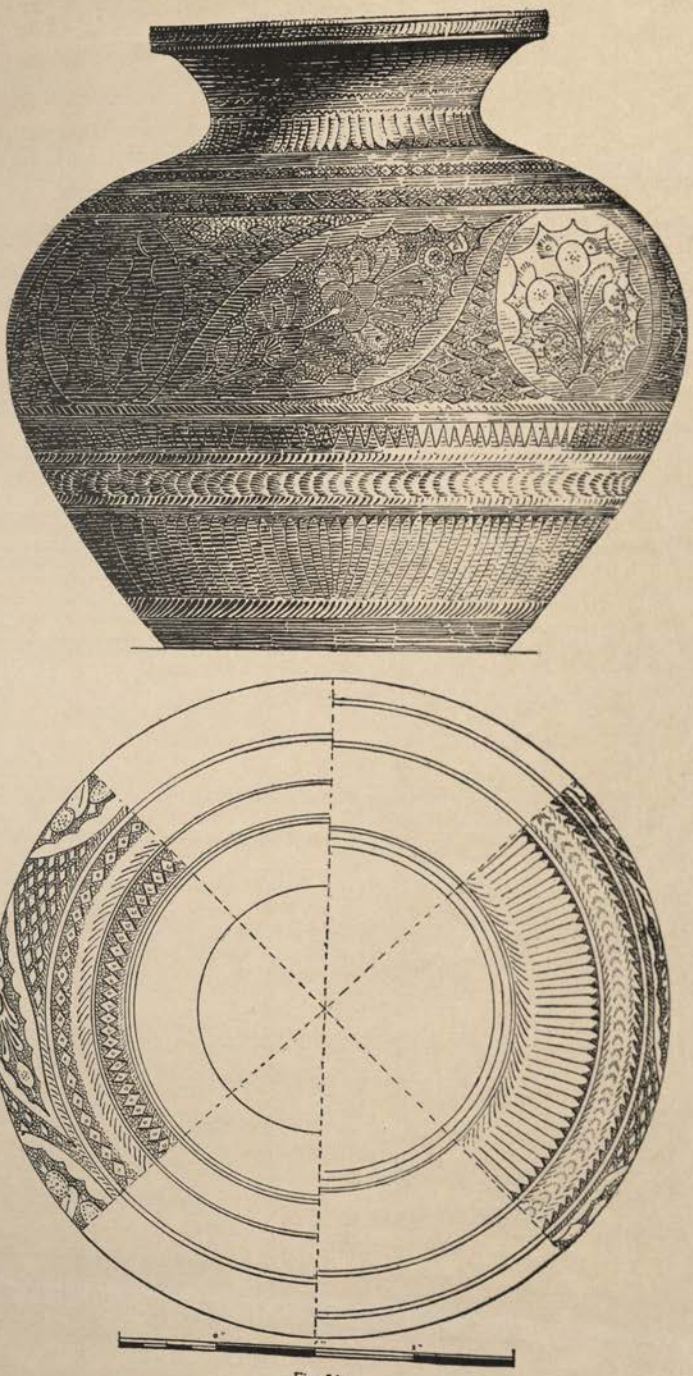


Fig. 54.

Fig. 54.

This chembu is decorated in the same manner as the preceding one though with a somewhat unusual pattern.

It is of brass and is in the Government Museum.

The various chembus illustrated have been chosen as shewing the great number of forms in common use and the typical ways in which they are usually decorated, but, as a rule, plain, unornamented vessels are used commonly in place of these here shewn, which are rather for special occasions.

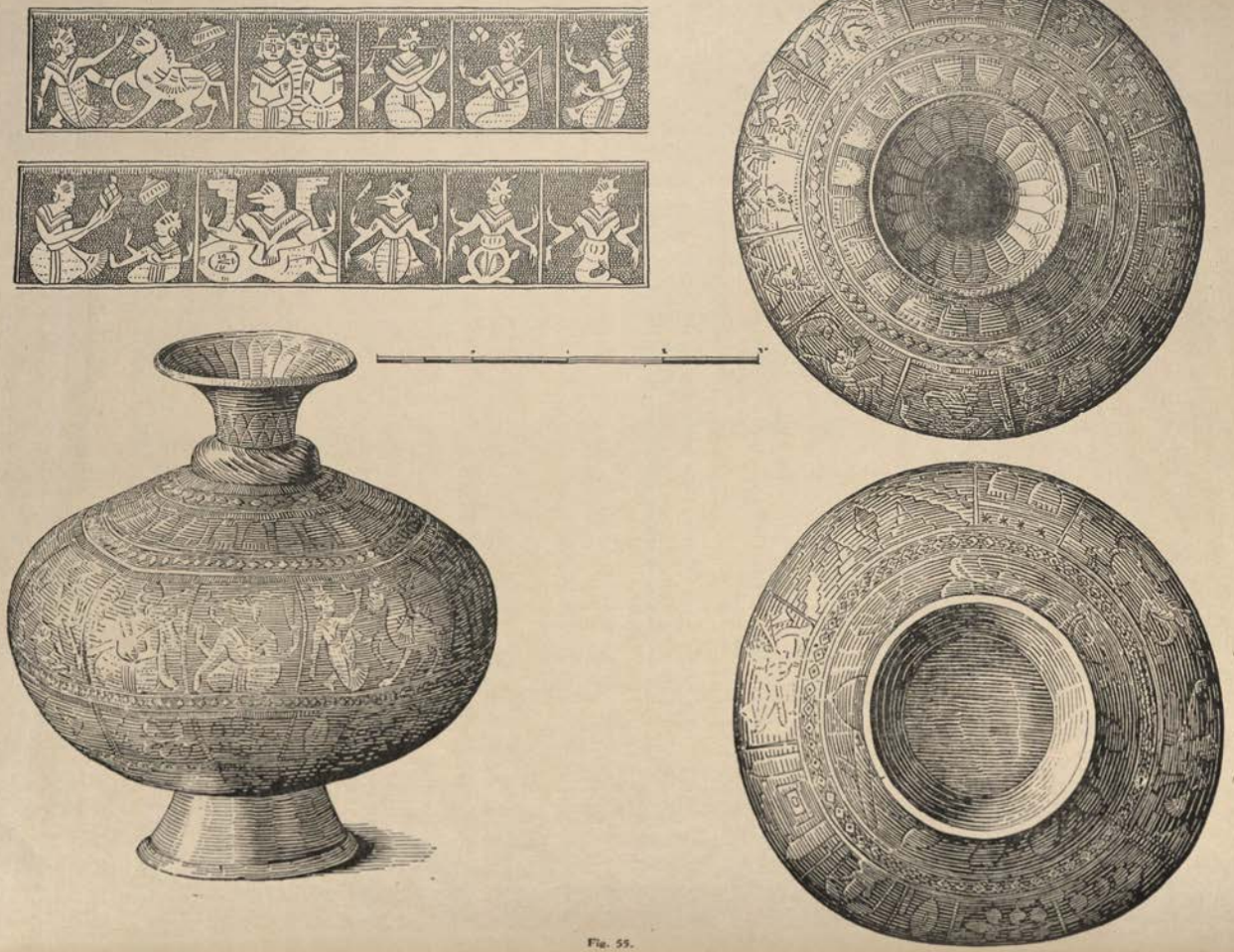


Fig. 55.

Fig. 55.

A northern form of vessel used for Ganges water or for drinking.

It is of brass and is decorated with bands of ornament and figures, the principal ones being the ten avatars of Vishnu with two added panels containing Ganesha and one other deity.

These vessels are brought from Benares, and the representation of the various deities is somewhat different from the South Indian renderings.

The specimen is in the School of Arts.

Fig. 56.

Fig. 56.

A copper chembu ornamented with panels containing the ten figures illustrating the avatars of Vishnu.

The vessel is of a graceful shape owing to its simplicity of outline and the fact that the lower part dominates the upper.

In vessels of simple form, unless one part is of much more importance than another, the shape is very apt to be awkward.

Figure 53 is a good example of this, the top and bottom being much of the same size, the curve which forms the body is unhappy, and contrasted with the present figure, in which the base is wider in proportion and much less marked, the transition from it to the mouth permits of a much more interesting curve.

The specimen is in the School of Arts.

Fig. 56-A.

Fig. 56-A.

This illustration shews the details from the chembu in figure 56.

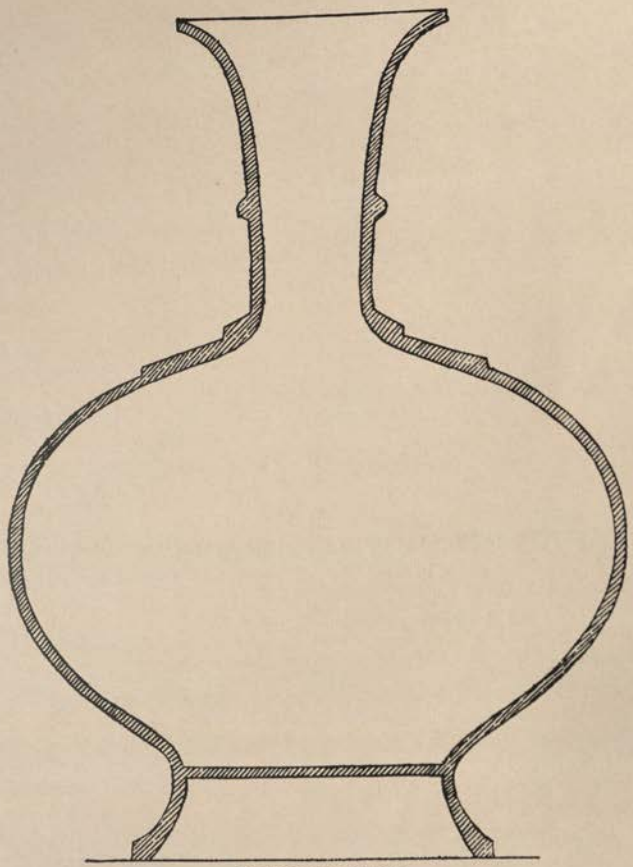
Fig. 57.

Fig. 57.

A cast brass lota with a scroll pattern around the body.

It is a northern form in metal but a common form in Southern India made of earthenware and called a goglet.

It is in the Government Museum.



SECTIONAL ELEVATION

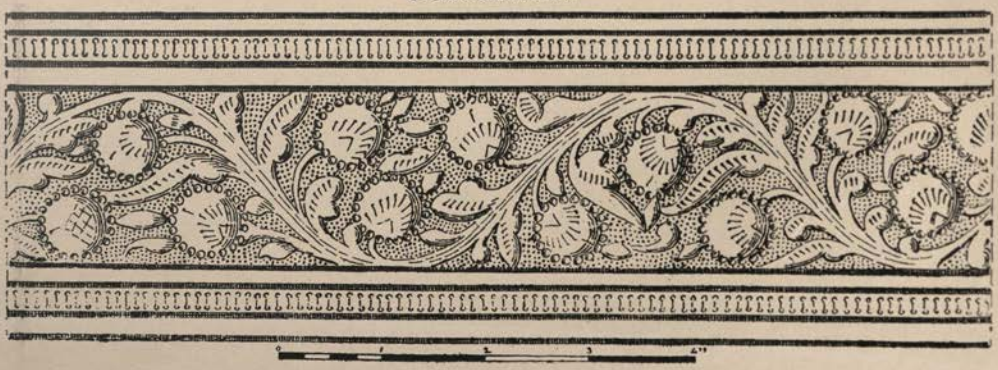
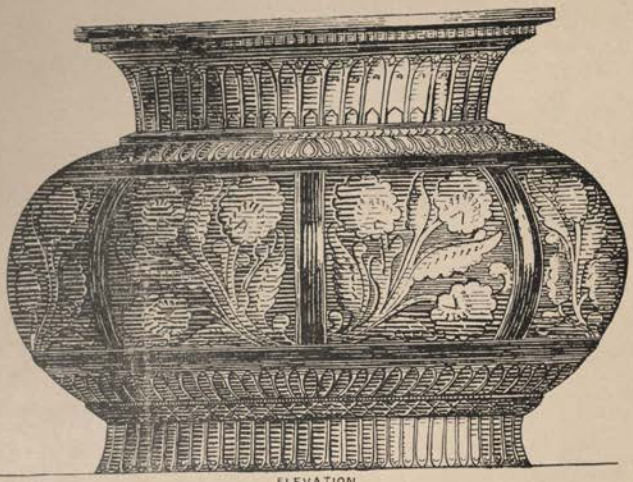


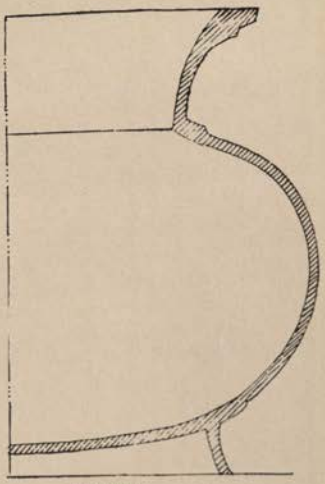
Fig. 57-A.

Fig. 57-A.

This shews the section and detail of ornament of the previous figure.



ELEVATION



SECTION

FRONT HALF OF PLAN

Fig. 58.

Fig. 58.

A small brass chembu with floral decoration in panels, which are separated by narrow bands of copper.

The detail of the ornament shews the freedom and variety which is common in this class of work.

It is in the Government Museum.

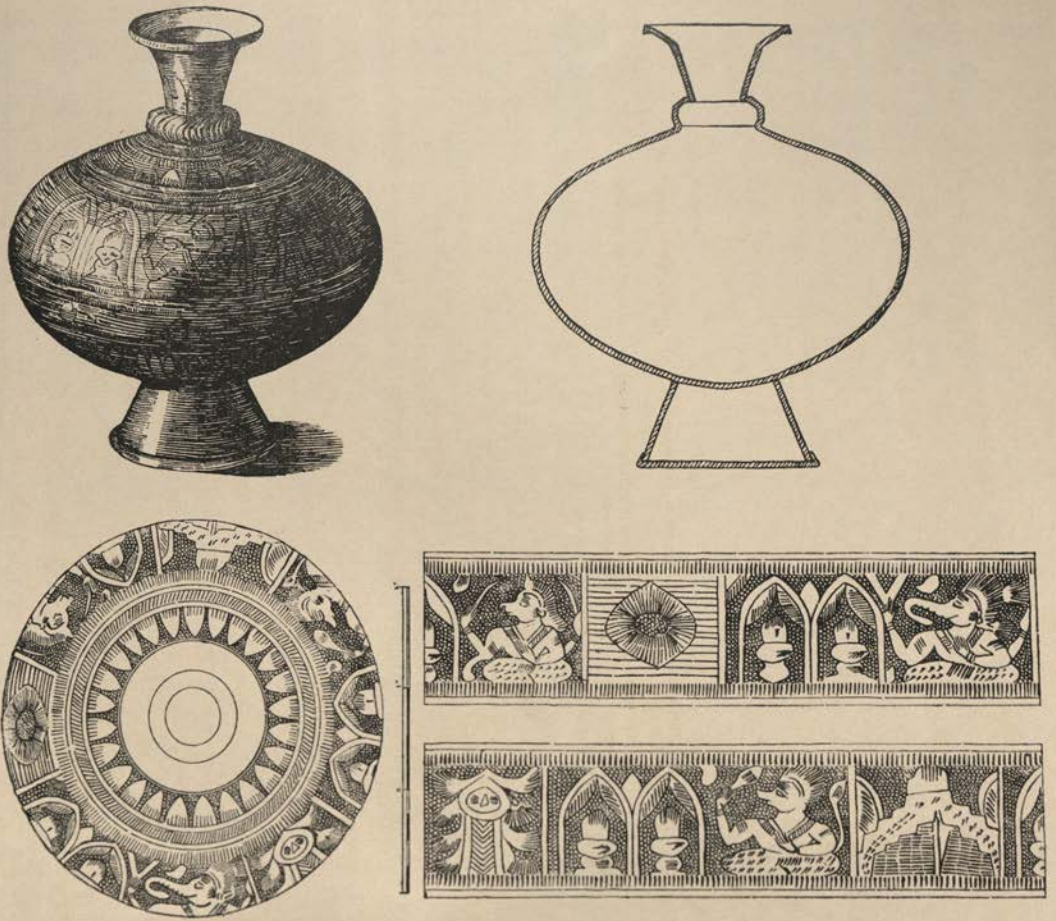


Fig. 59.

Fig. 59.

This vessel of brass and copper is ornamented with very crudely worked figures of deities and lingams.

The base and central band are of copper, the other parts of brass, symbolizing the two sacred rivers—the Ganges and Jumna.

It is in the School of Arts.

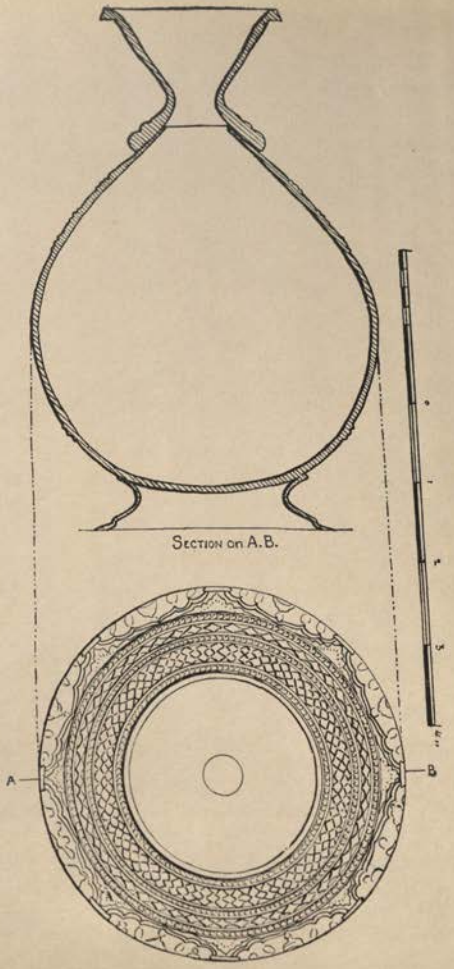


Fig. 60.

Fig. 60.

A lota of brass with decorations of the avatars of Vishnu.
It is in the School of Arts.

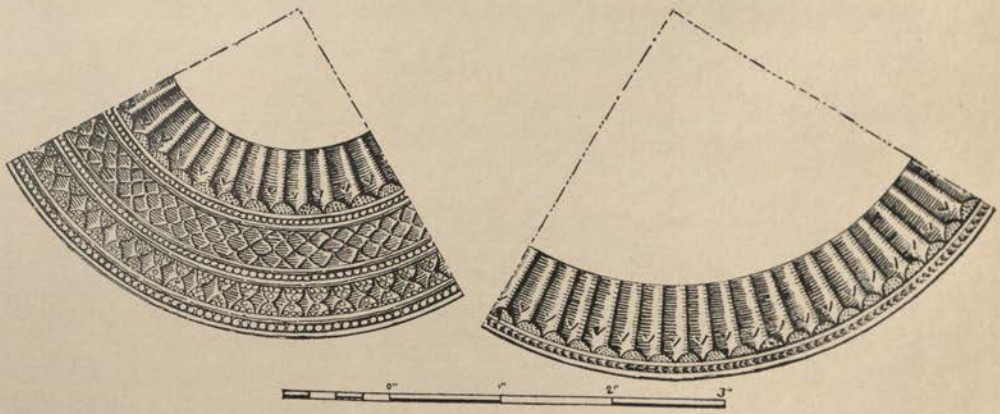


Fig. 60-A.

Fig. 60-A.

This drawing shews the details of the decoration of the preceding lota. A notable feature of the pattern is the Saracenic arch at the top of the panels separating the figures.

There is also to be noticed the arrangement of the order of the ten avatars.

The first seven, namely, the fish, tortoise, boar, man-lion, dwarf, Rama with the axe and Rama with the bow and the tenth or horse avatar are fairly constant in this order in both northern and southern work, but the eighth avatar, is, according to South Indian writers, Krishna, and the ninth Veguttram, or "plurality" avatar, which at one time was considered to be the same as Buddha.

In the present example the sixth, seventh and eighth avatars are respectively Parasurama, Rama (with the bow) and Balarama or Balabhadra (Rama with the plough share), and Krishna takes the ninth place.

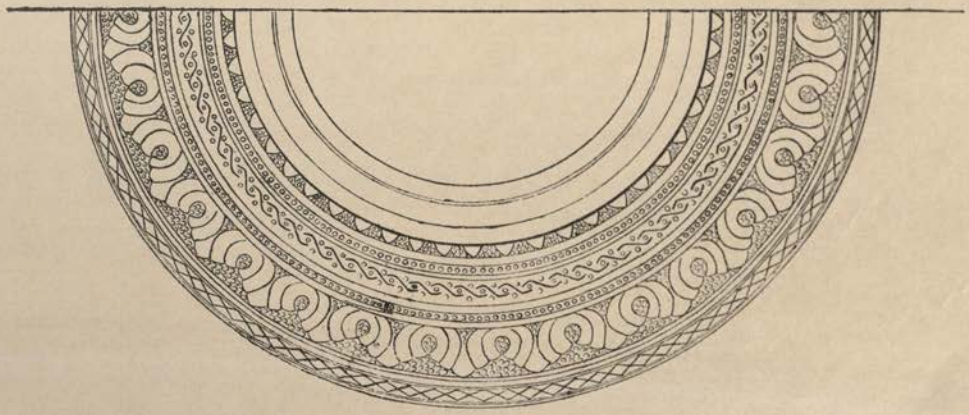


Fig. 61

Fig. 61.

This cast brass chembu, in the School of Arts, is decorated with panels in which are figures, of deities, meant to represent the Vishnu avatars, and one or two other deities, of which Ganesha is the only one easily recognizable.

Fig. 61-A.

Fig. 61-A.

These details of the decoration of the previously illustrated chembu are interesting as shewing how much can be expressed by crude and simple workmanship.

As in a certain modern school of painting, nothing but essentials are represented.

The separation of the panels are a compromise between a leaf form and a column and arch, the serrations of the leaf taking the form of the cusps of a Saracenic arch and the outline that of a supporting column.

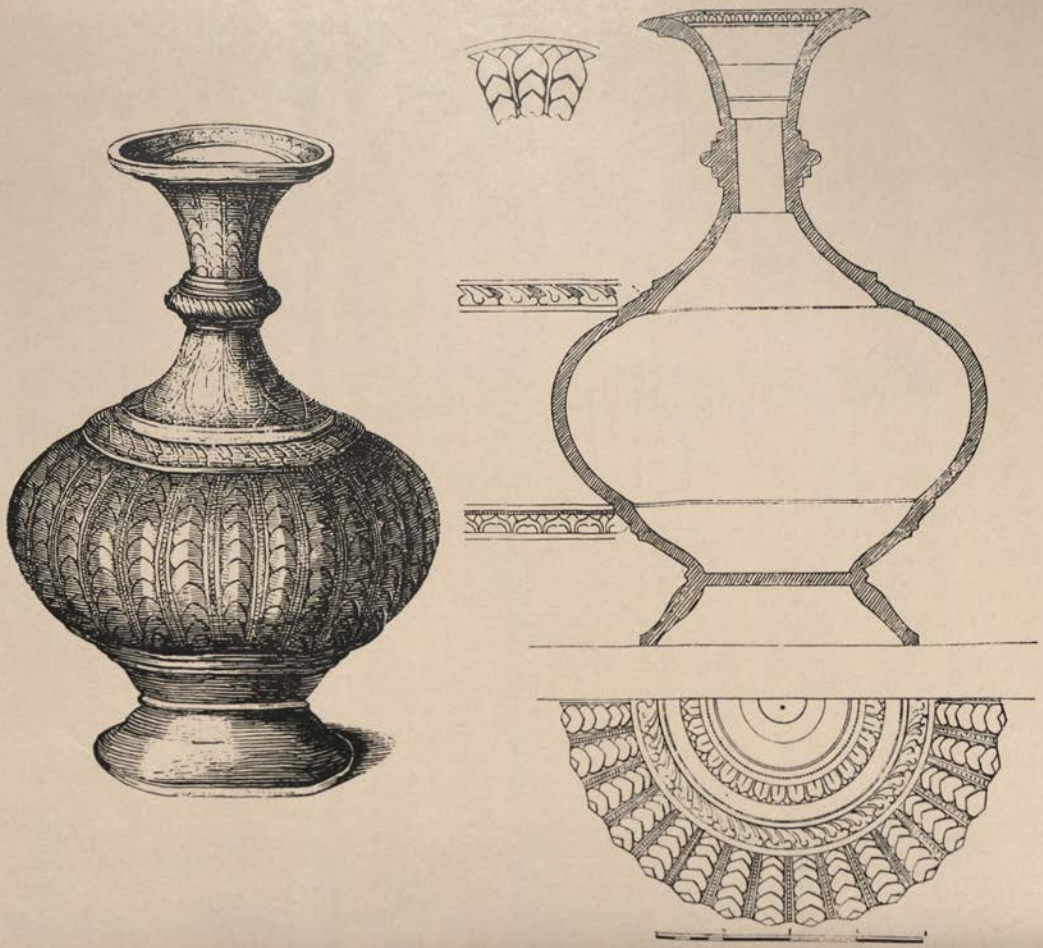


Fig. 62

Fig. 62.

A cast brass lota of northern form, in the Government Museum. The decoration, though simple, is effective.

Fig. 63.

Fig. 63.

A cast and hammered brass chembu decorated with the avatars of Vishnu. The figures are unusual, as they apparently represent female forms. It is in the Government Museum.

Fig. 64.

Fig. 64.

A hammered copper lota similar to those already illustrated in figures 55-59 etc.

The decoration is of many lingams and deieties, in bands, separated by inscriptions.

The form approaches more closely than in the other examples to the narrow necked vessel which is in use in Travancore and which closely resembles a cocoanut in outline.

This is probably of northern origin.

It is in the School of Arts.

Fig. 65.

Fig. 65.

This brass chembu is freer in its decoration than any of the other examples. The winged figures represent Gandharbas, winged heavenly choristers, and scroll pattern between, though free from stiffness, is not very carefully designed. It is in the Government Museum.

Fig. 66.

Fig. 66.

A brass chembu with a well arranged floral pattern in panels formed by an upright scroll.

It is in the Government Museum.

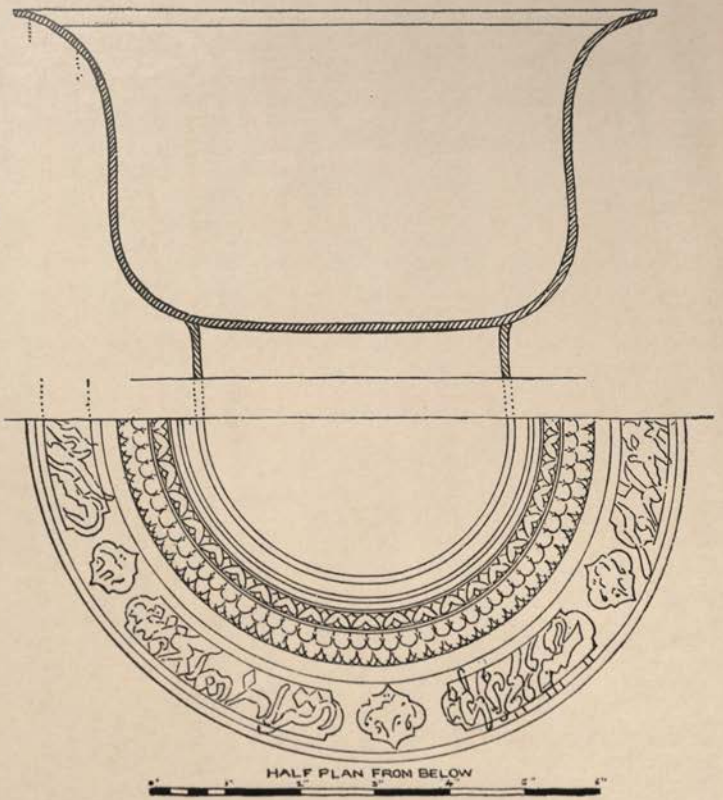


Fig 67.

Fig. 67.

A copper bowl used by Mussalmans and decorated with inscriptions and bands of ornament.

The form is probably a close copy taken from a porcelain bowl.

It is in the Government Museum.

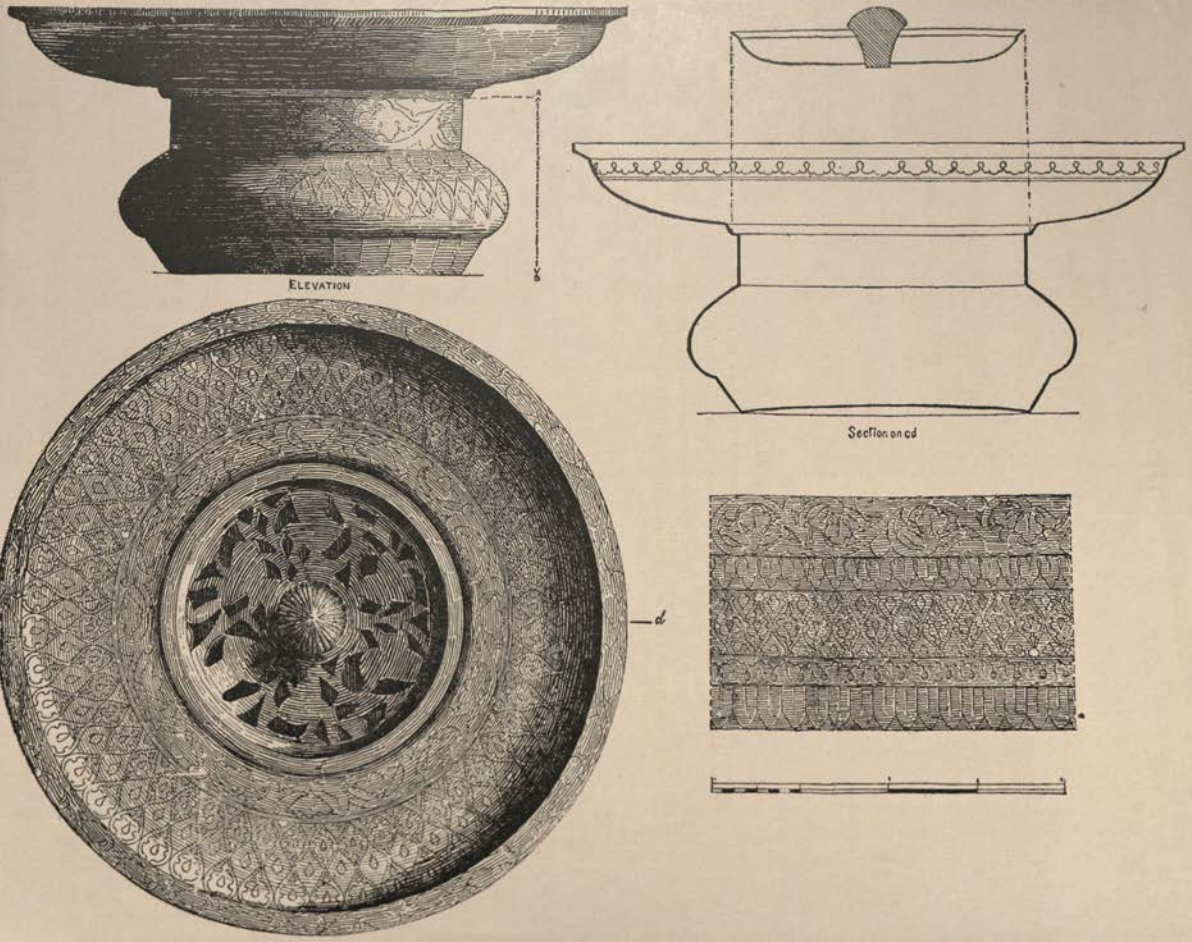


Fig. 68.

Fig. 68.

This wash-hand basin is the common form used by Mussalmans.

It is generally accompanied by a ewer of the form shewn in figure 74.

The section and plan shows the construction and the perforated cover, which conceals the lower part, and through which the water from ablutions runs.

It is in the Government Museum.

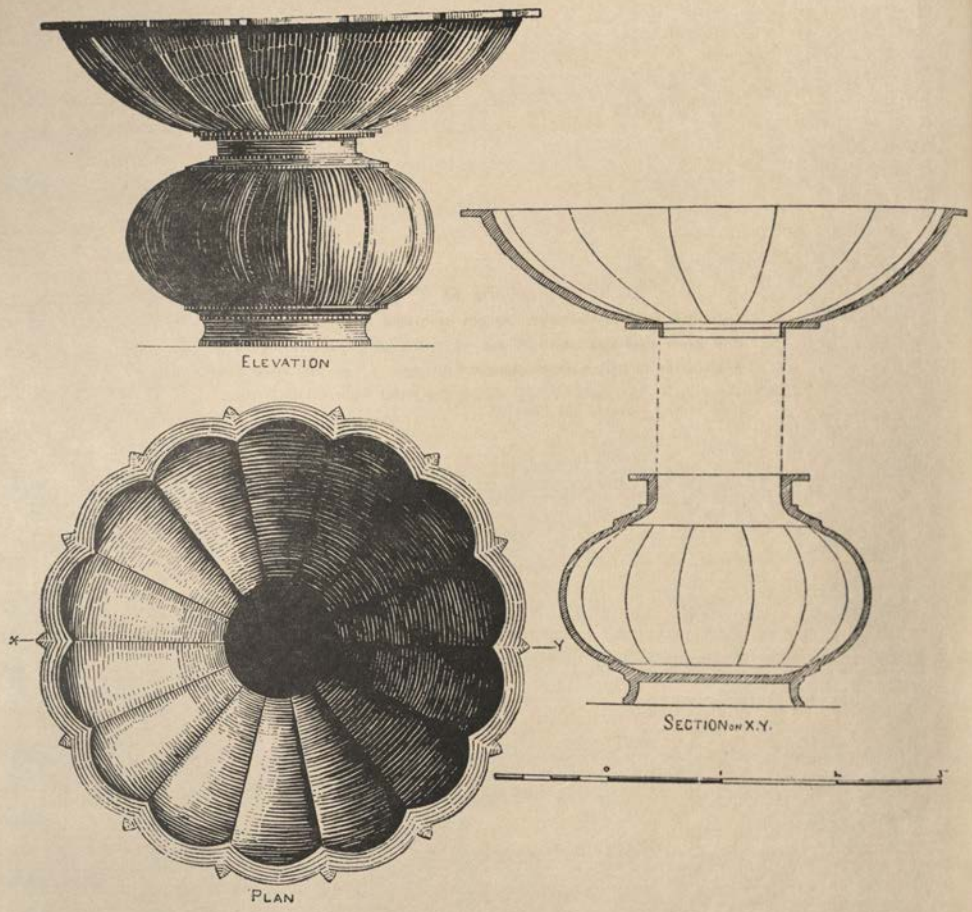


Fig. 69.

Fig. 69.

A similar basin to the preceding but decorated with gadrooning.
The upper part lifts off the lower.
It is in the Government Museum.

Fig. 70.

Fig. 70.

A copper and brass water jug of a Nepalese pattern but made in Palghat, Malabar.

It is an interesting form and very unusual in the South.

The vessel is of hammered copper, except for the rim, foot and handle, which are of brass.

It belongs to the Victoria Technical Institute.

Fig. 70-A.

Fig. 70-A.
This shews the section of the preceding jug.

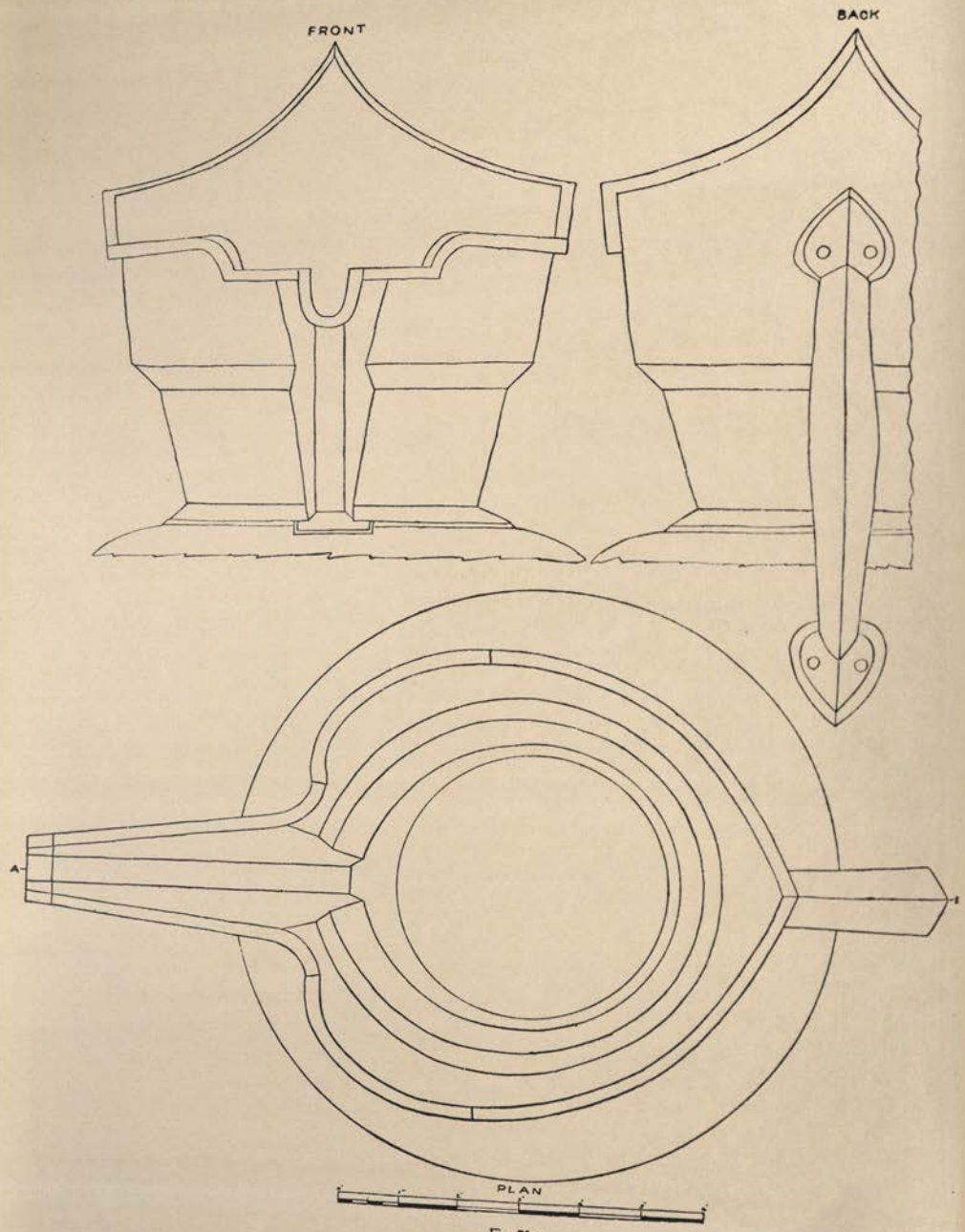


Fig. 70-a.

Fig. 70-B.

These shew the details of the handle and spout and the plan from above, of the jug, figure 70.

Fig. 71.

Fig. 71.

This form of oil jug, for replenshing the oil of lamps, is frequently met with in temples.

It is of hammered brass, the handle in the form of a knot.

The specimen is in the Government Museum.

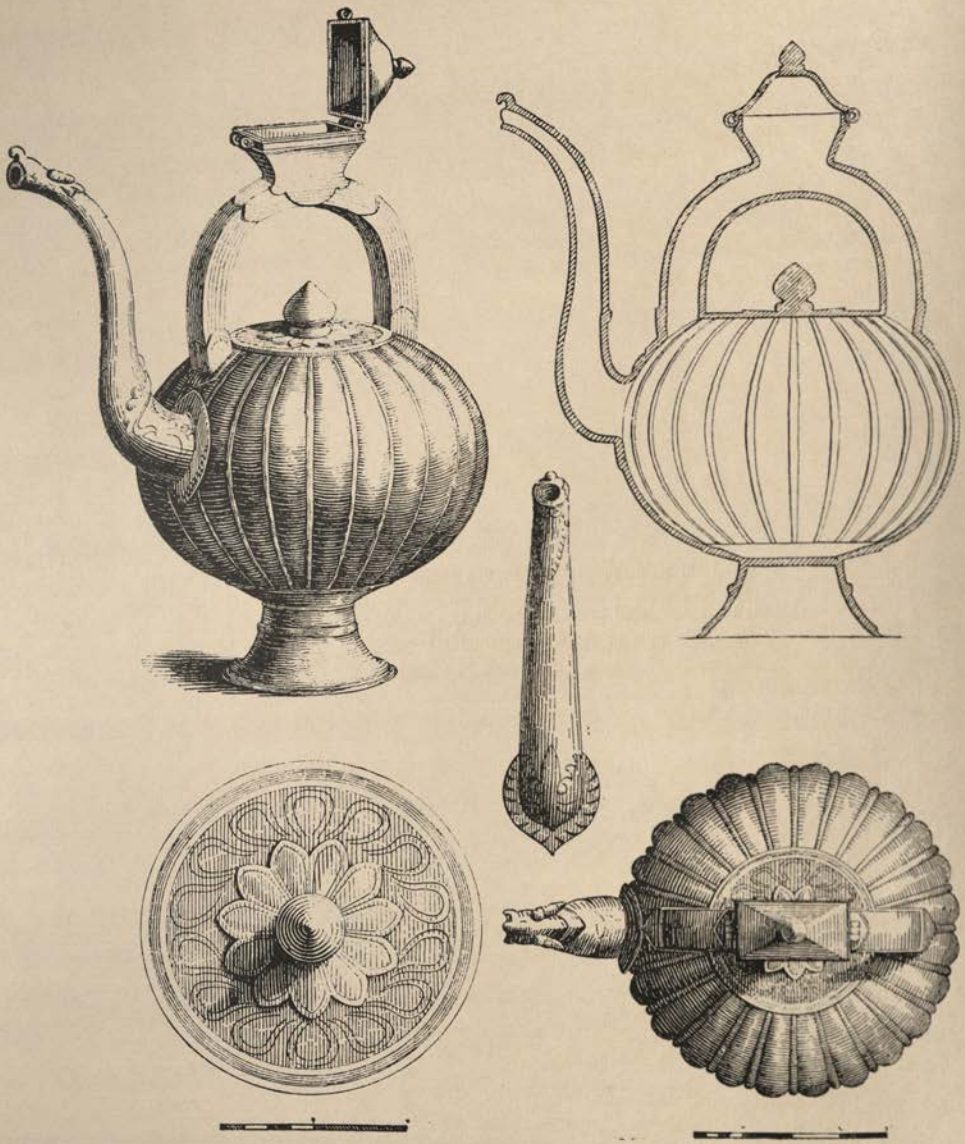


Fig. 72.

Fig. 72.

A cast brass water pot used by Mussalmans.

The only opening except the spout is through the small lid at the top of the handle, which is hollow.

The apparent lid below is fixed.

The form is obviously suggested by a melon.

It is in the Government Museum.

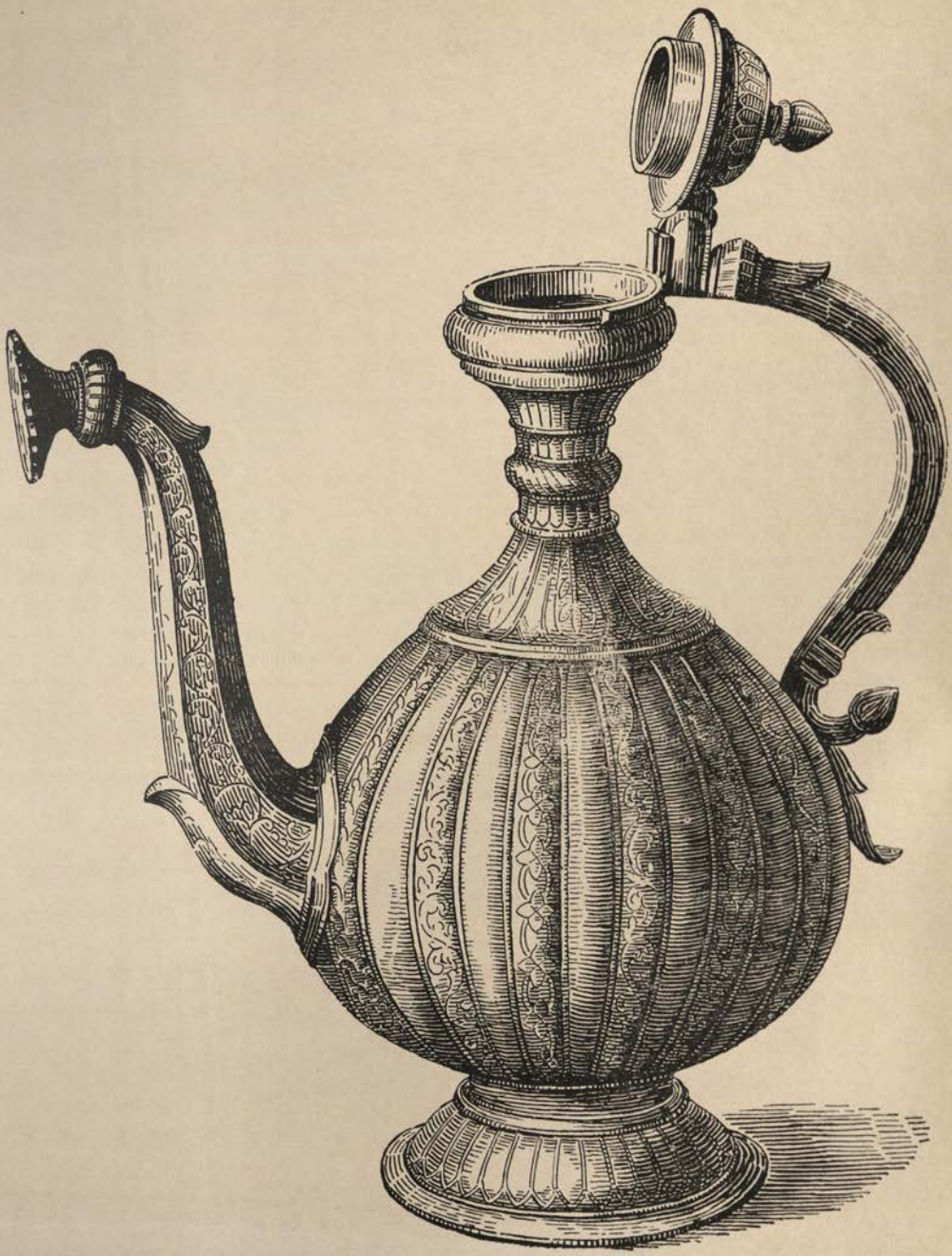


Fig. 73.

Fig. 73.

This water pot, also used by Mussalmans, is similar to the Hindu lota shewn in Figure 60 but with the addition of a handle, cover and spout.

It is an excellent specimen of cast brass and is in the Government Museum.

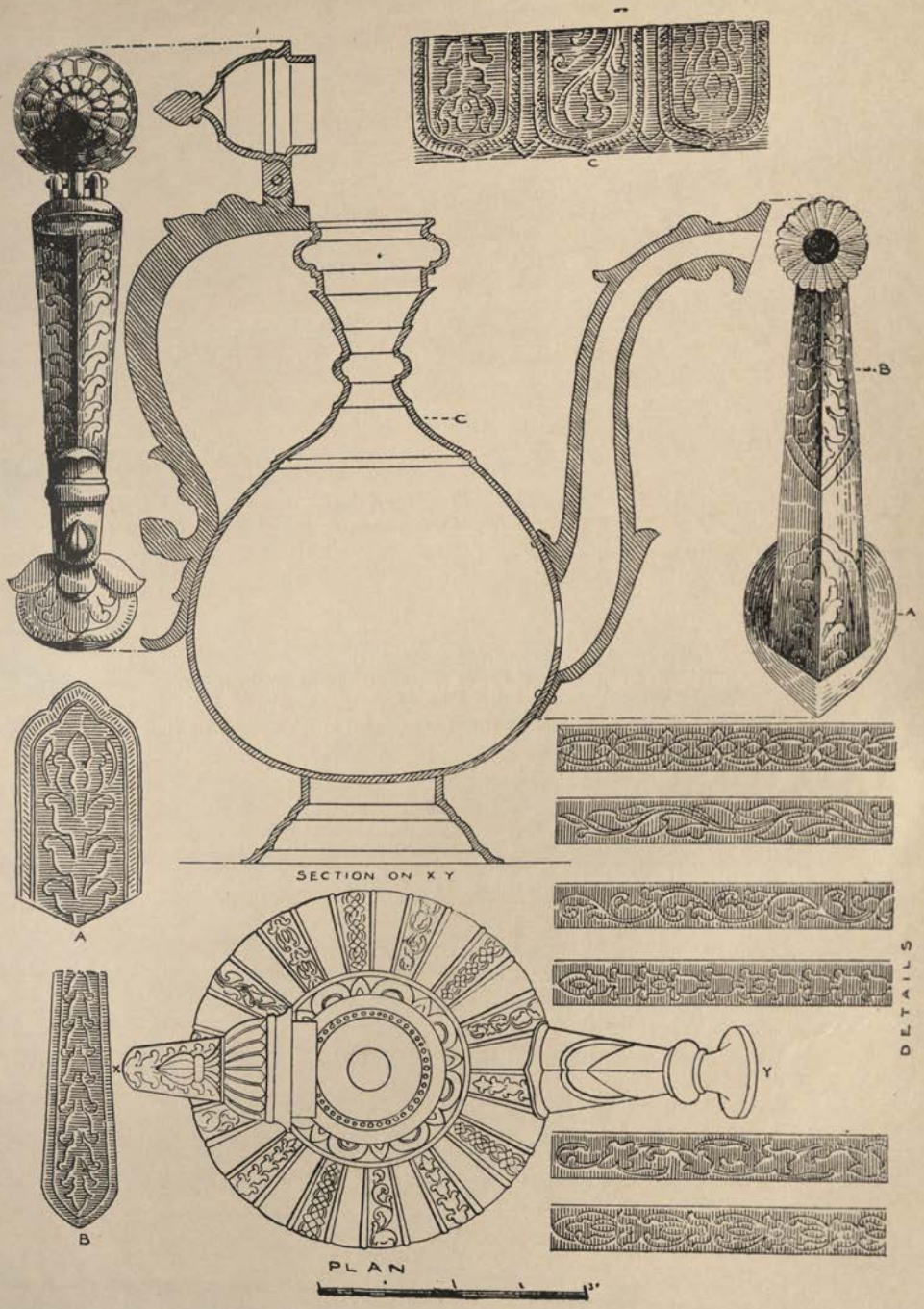


Fig. 93-A.

Fig. 73-A.
The drawings shew the details of the previous figure.

Fig. 74.

Fig. 74.

This water pot is a common form, in use particularly in the Punjab.

It is of copper and shews traces of tinning, a usual practice among Mussalmans with their domestic utensils.

It is in the School of Arts.

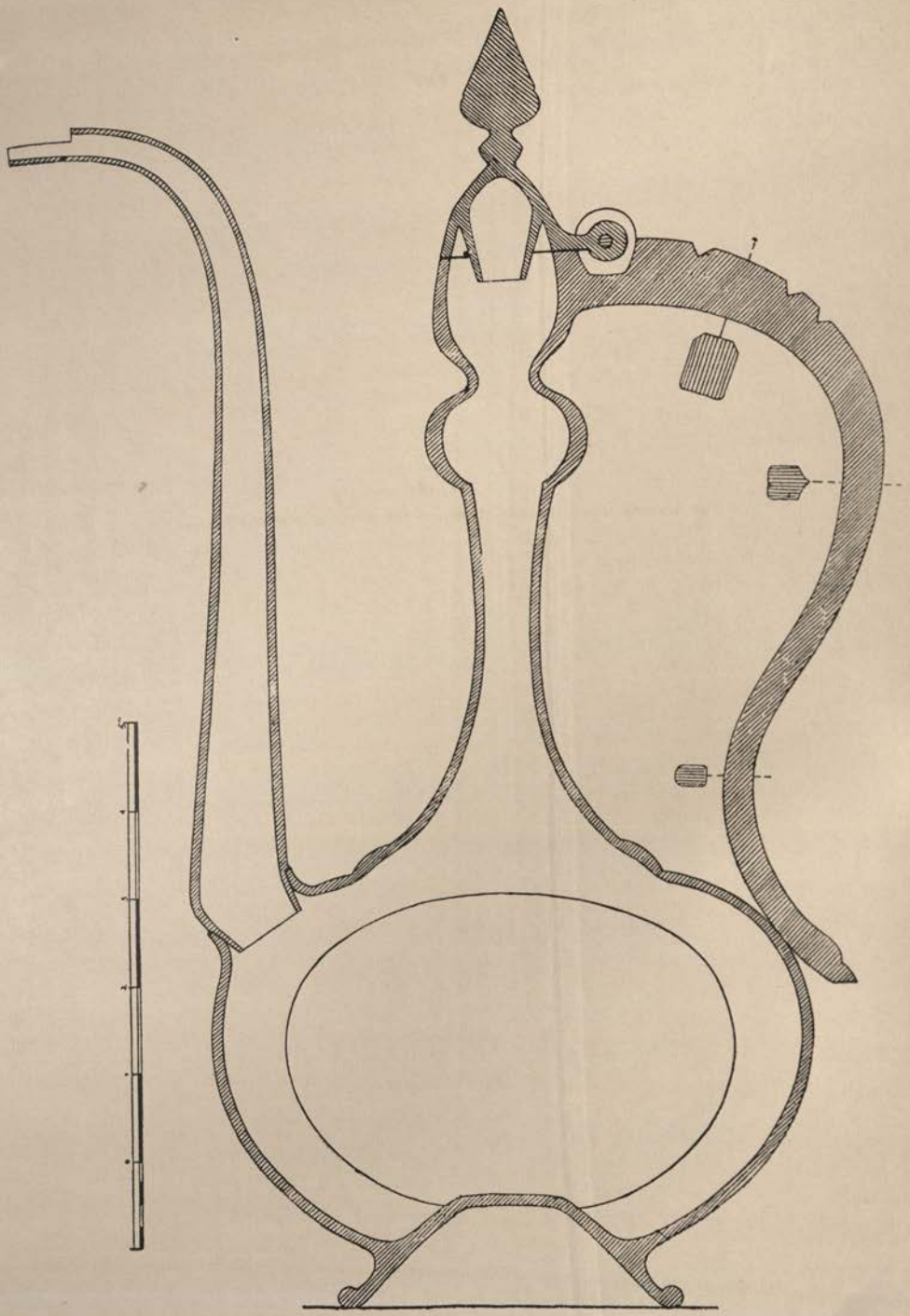


Fig. 74-A.

Fig. 74-A.
The drawing shews the side section of the previous water vessel.

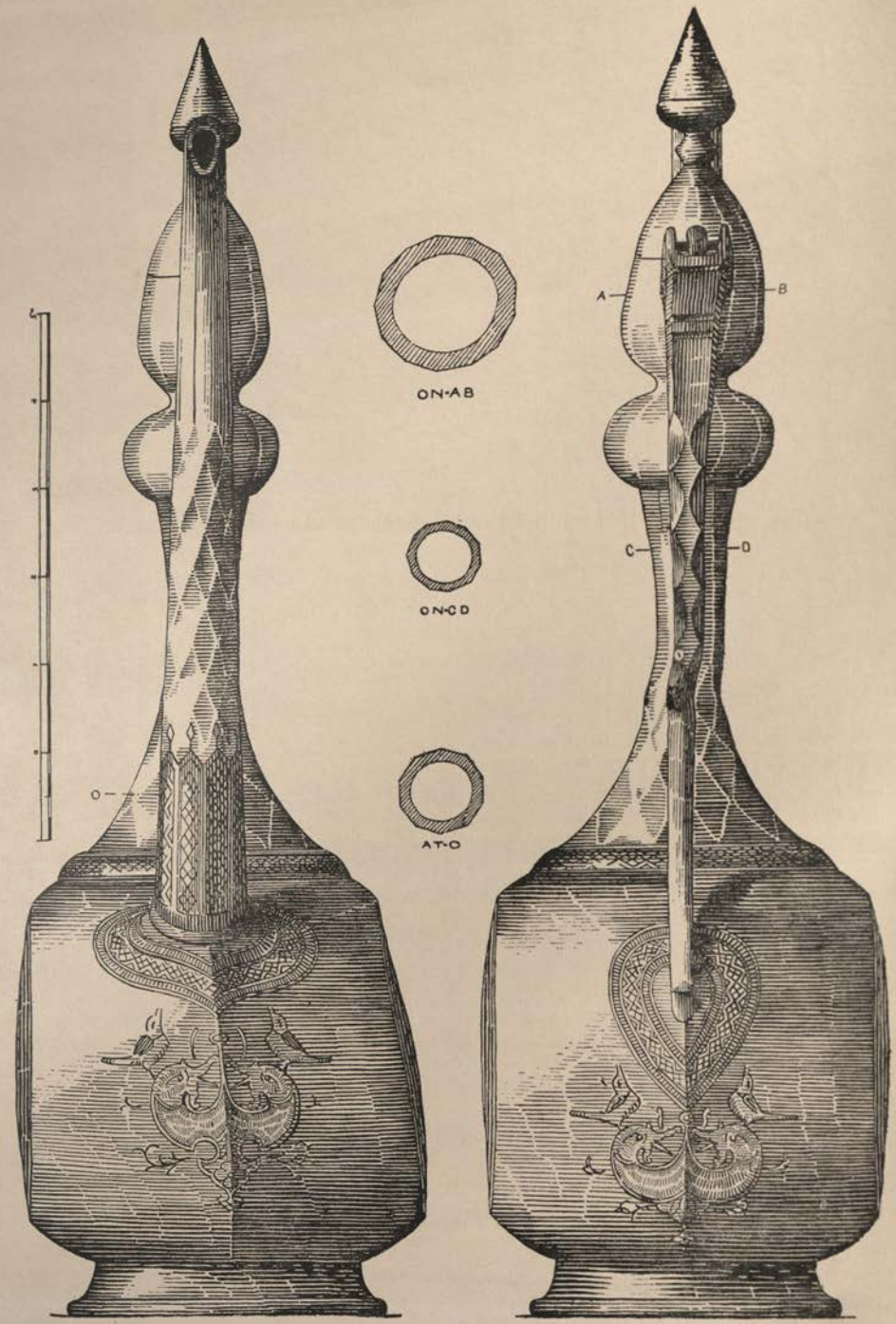


Fig. 74 B.

Fig. 74-B.

This shows the front and back elevations of the water vessel (Figure 74).

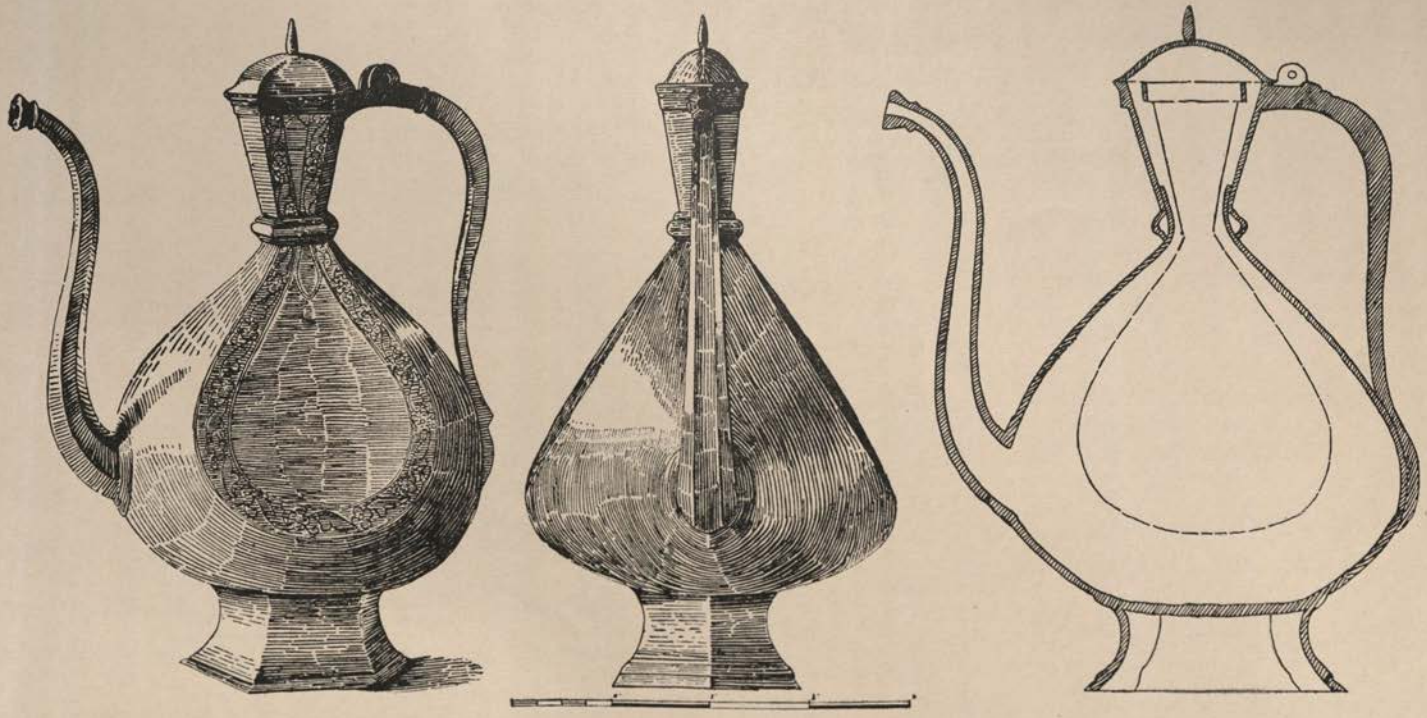


Fig. 75.

Fig. 75.

A gracefully-shaped brass water or coffee pot, used by Mussalmans.

It is in the School of Arts.

Unlike the domestic utensils used by Mussalmans, a noticeable feature of the domestic utensils used by South Indian Hindus, is that the article is always capable of being easily cleaned, both inside and out.

Such vessels as the one illustrated are never found in use by Hindus in the South.

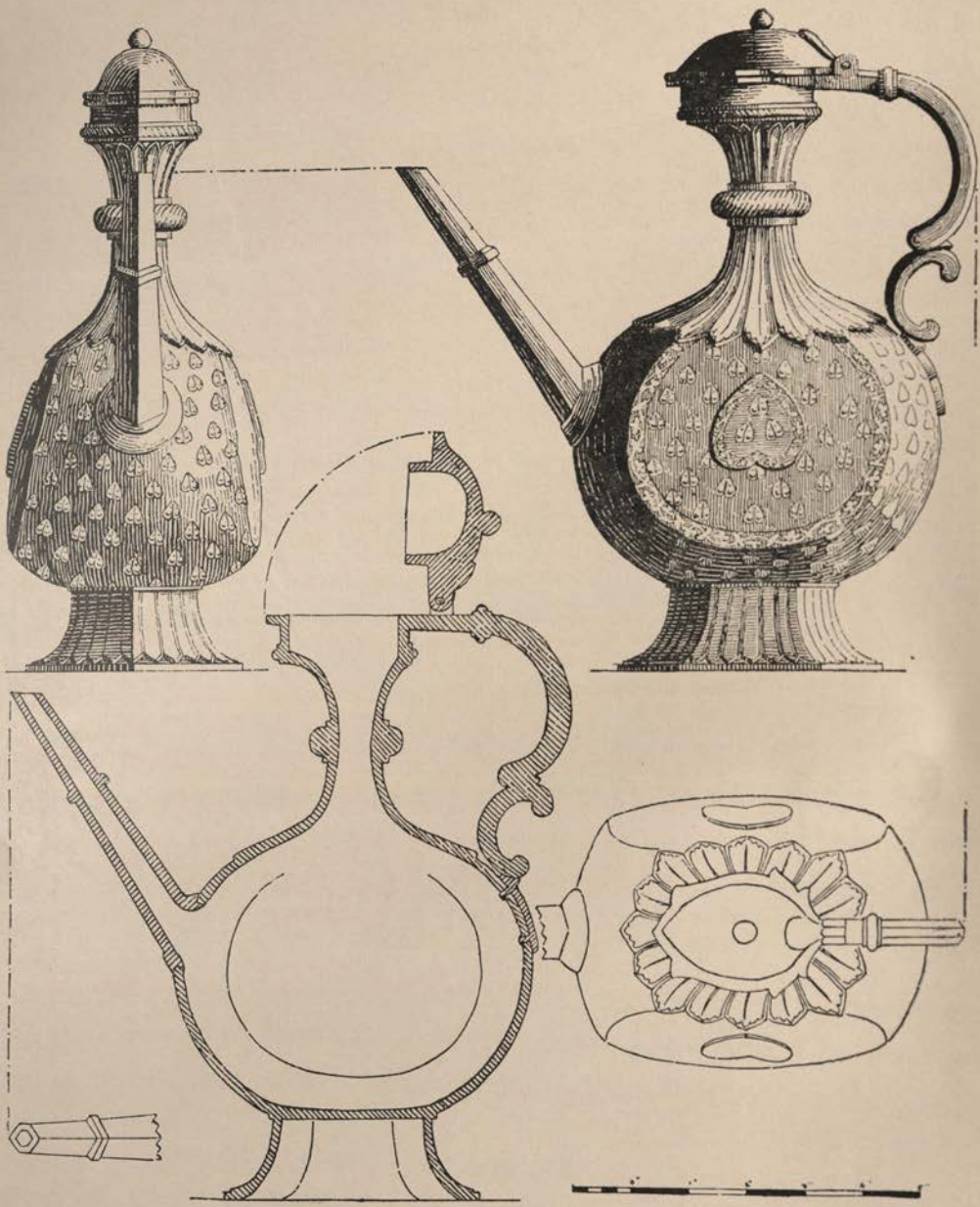


Fig. 76.

Fig. 76.

A small cast brass pot of a type similar to the preceding example; decorated with a leaf or heart-shaped motif. its general form is probably borrowed from a porcelain model.

It is in the Government Museum.

Fig. 77.

Fig. 77.

A brass spherical water or coffee pot.

This is a very interesting example of a vessel used by Mussalmans but decorated with Hindu motifs.

The handle and fastening is a combination of bird forms, very commonly used as hooks for hanging lamps by Hindus, and the spout is of a pattern usually found on vessels of the type of figure 46.

It is noticeable that in many covered pots found in South India, the lid is frequently attached to the vessel by a chain.

The simplicity of this pot with its great restraint in ornament makes it an almost unique example.

It is in the Government Museum.

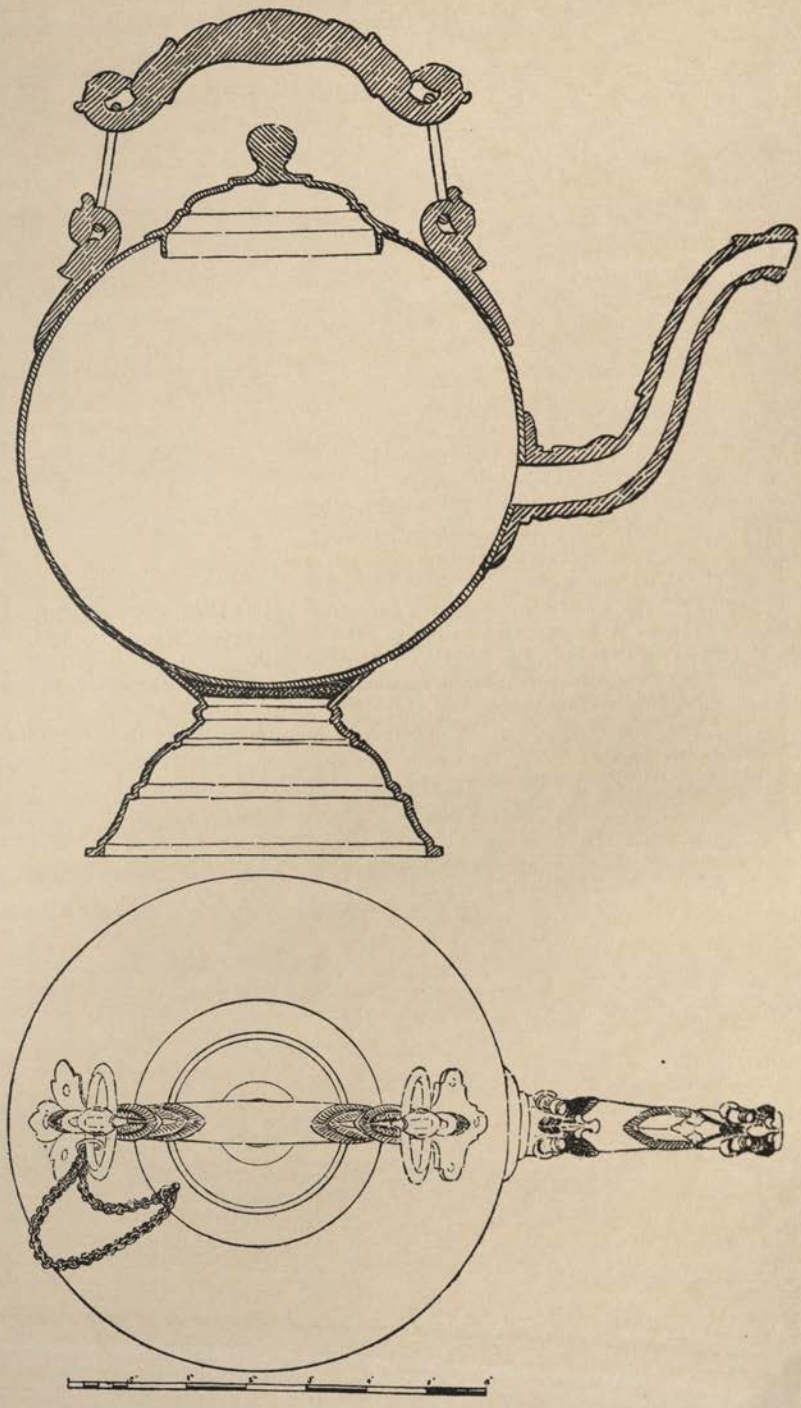


Fig. 77-A.

Fig. 77-A.

These drawings shew the section and plan of the preceding pot.

SECTION ON AB

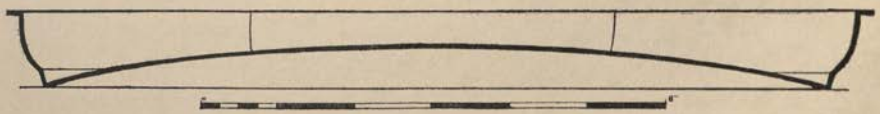


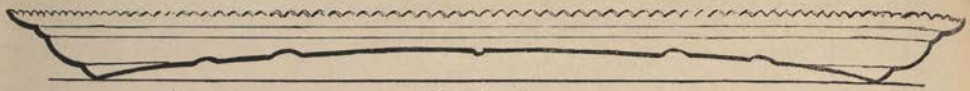
Fig. 78.

Fig. 78.

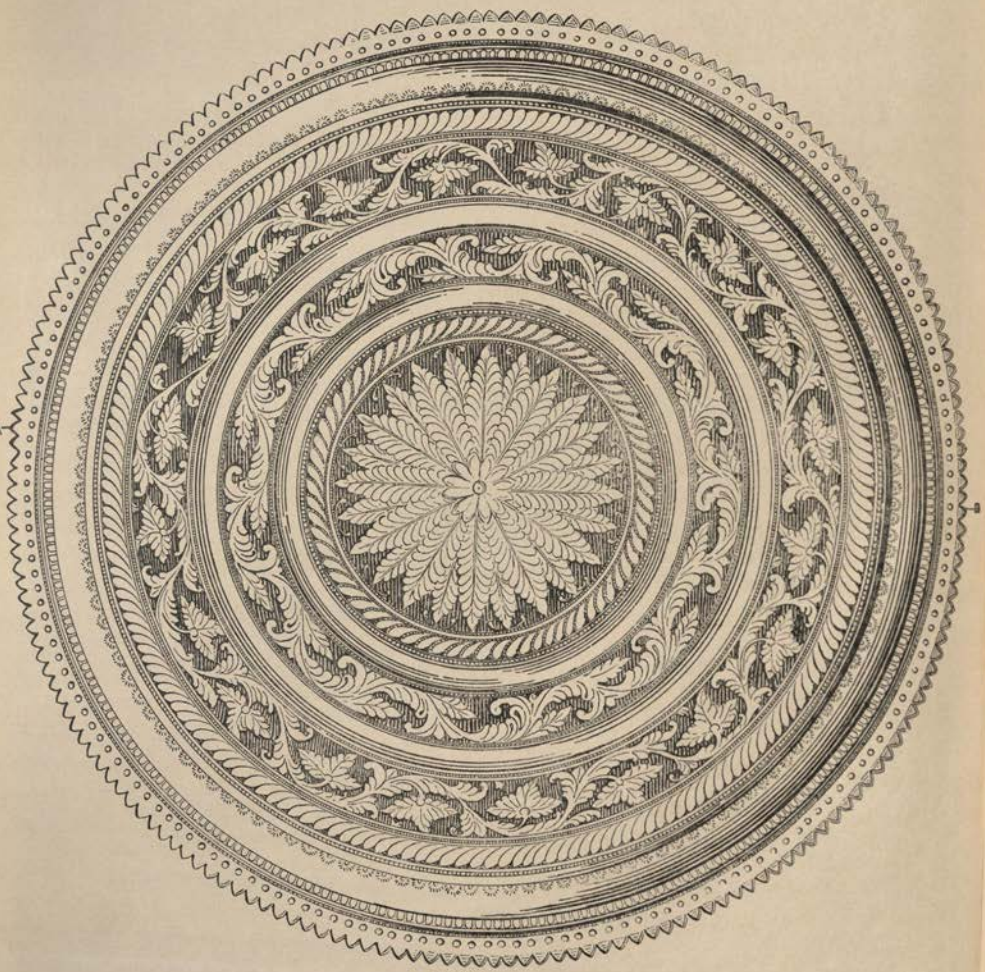
The series of trays or shallow dishes beginning with this figure shew most of the forms in common use. The shapes are generally circular, but hexagonal and octagonal and sometimes even oval trays are found. These are by no means so common as circular ones.

They are found in every household and are invariably used among Hindus, as Europeans use a salver, this is, for handing any article. As the article to be handed or retained in the tray is generally betel-leaf and areca-nut, there is no necessity for the surface of the tray to be smooth. It is, therefore, not uncommon to find work in relief on them, and this may be either confined to the central ornament, or covering the whole tray, as in this example, which is decorated with the avatars of Vishnu and a figure of Ganesha.

The specimen is of brass and is in the Government Museum.



SECTION ON AB



PLAN

Fig. 79.

Fig. 79.

A large brass tray with ornament of a continuous scroll and centre of a radiating leaf form.

It is an uninteresting pattern and though the saw-like edge is very unpleasant, the workmanship is good.

It is in the Government Museum.

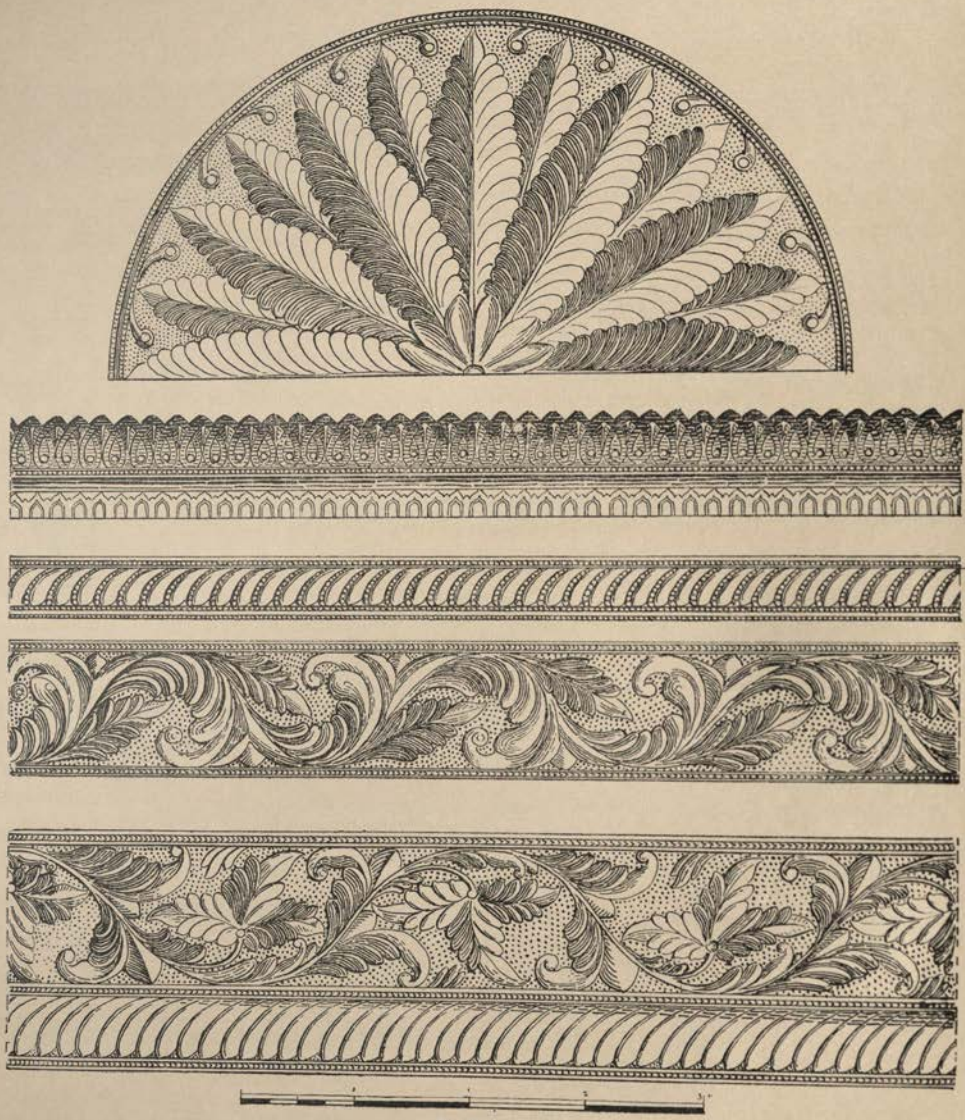


Fig. 79-A.

Fig. 79-A.

This shews the details of the tray (Figure 79).

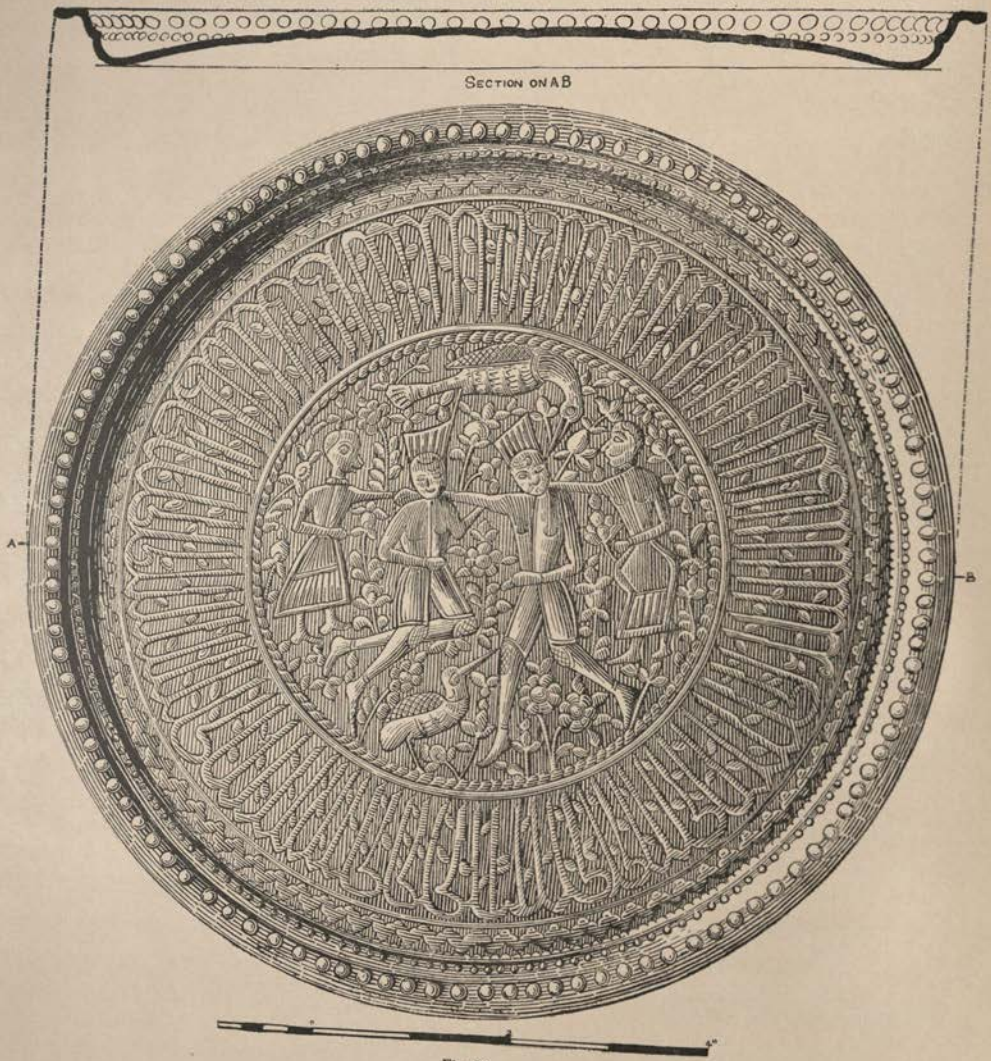


Fig. 80.

Fig. 80.

A tray decorated with a group of figures and a surrounding border of Persian character.

The characters are merely used ornamentally, without meaning.

It is in the Government Museum.

Fig. 81.

Fig. 81.

This brass tray has a well-planned border of lion forms.

It is less monotonous than the pattern of figure 79 and is quite a typical example of modern South Indian design, but by no means of the best sort.

It is in the Government Museum.

Fig. 81-A.

Fig. 81-A.

These drawings shew the details of the previous figure.

SECTIONAL ELEVATION

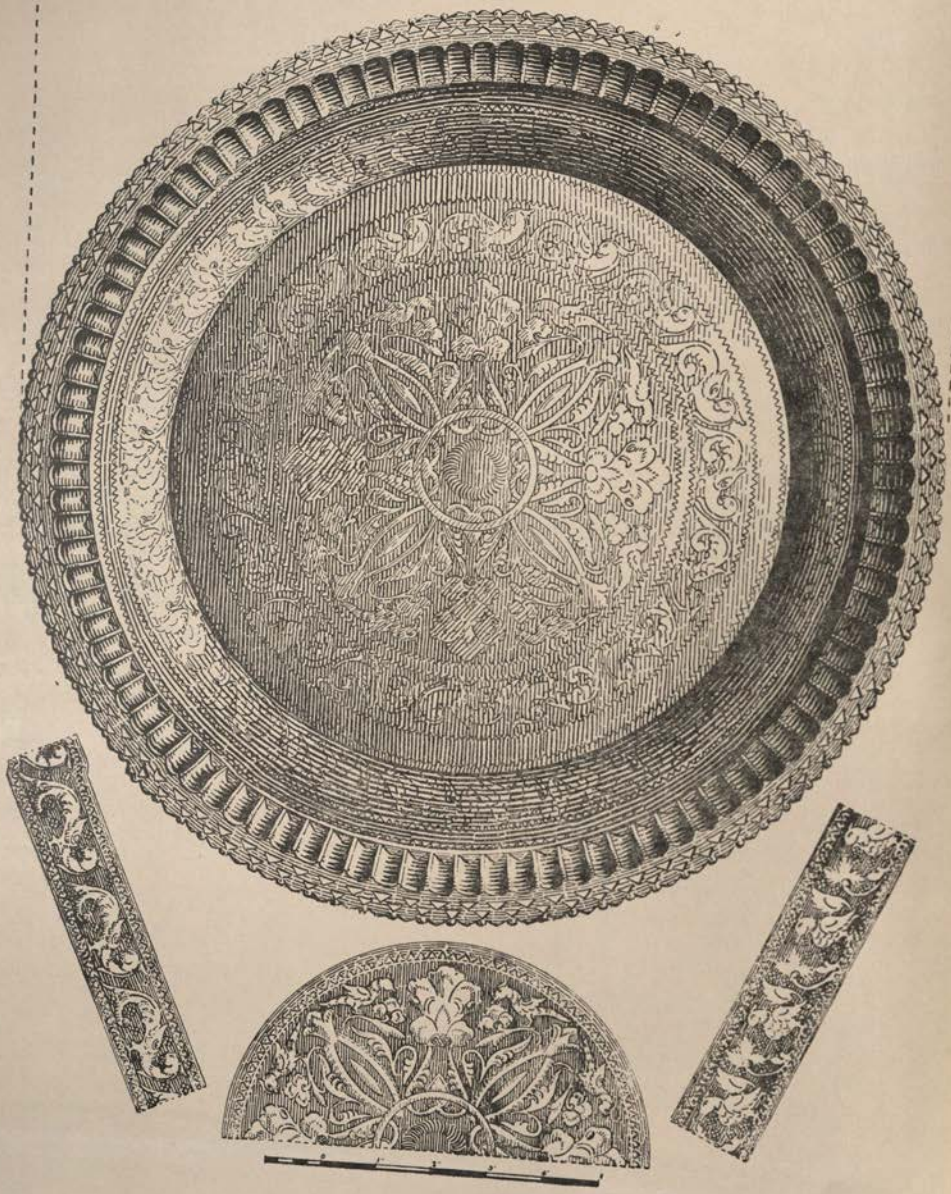


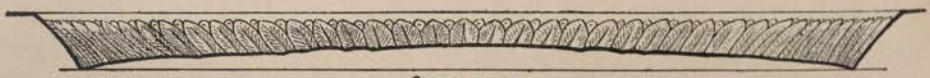
Fig. 82.

Fig. 82.

The pattern of this brass tray is very delicate and skilfully arranged. The same motif, of a flower and a parrot, is kept throughout.

It is in the Government Museum.

PLAN



SECTION ON AB

SCALE OF INCHES

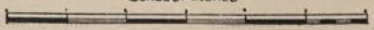


Fig. 83.

Fig. 83.

A brass tray with figures of Garuda and Hanuman with Ganesha between and probably Kuvera below.

The other four figures probably represent devadasis.

The forms and ornament are well composed, though the Ganesha and Kuvera are out of scale with the other figures.

It is in the Government Museum.

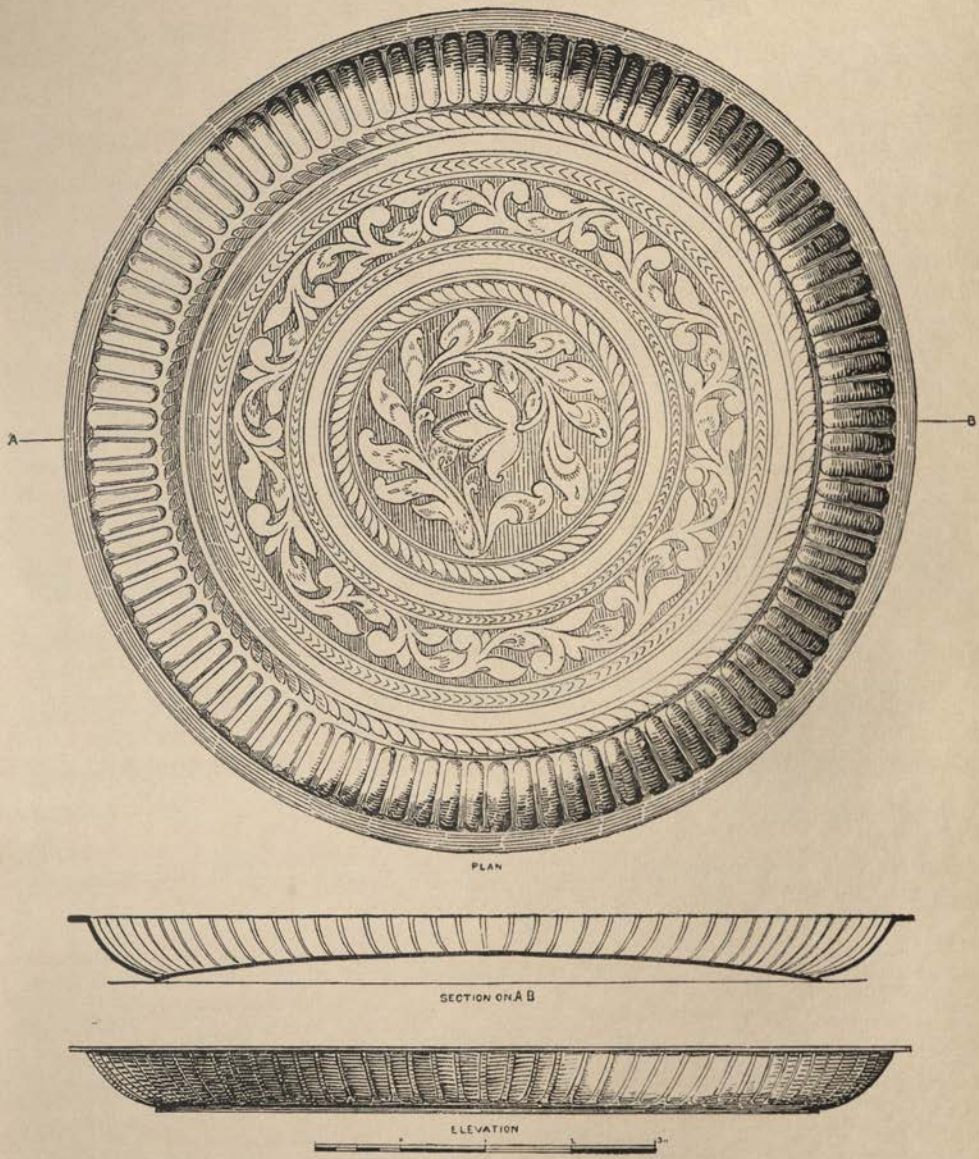


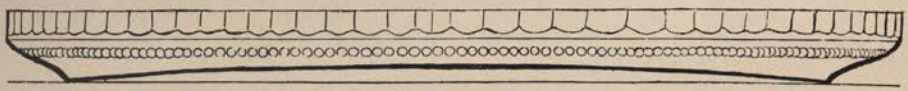
Fig. 84.

Fig. 84.

This is a very common form of tray with fluted rim and floral ornament in the centre.

The centre ornament in this type of tray is very often a swan.

It is in the Government Museum.



SECTION ON XY

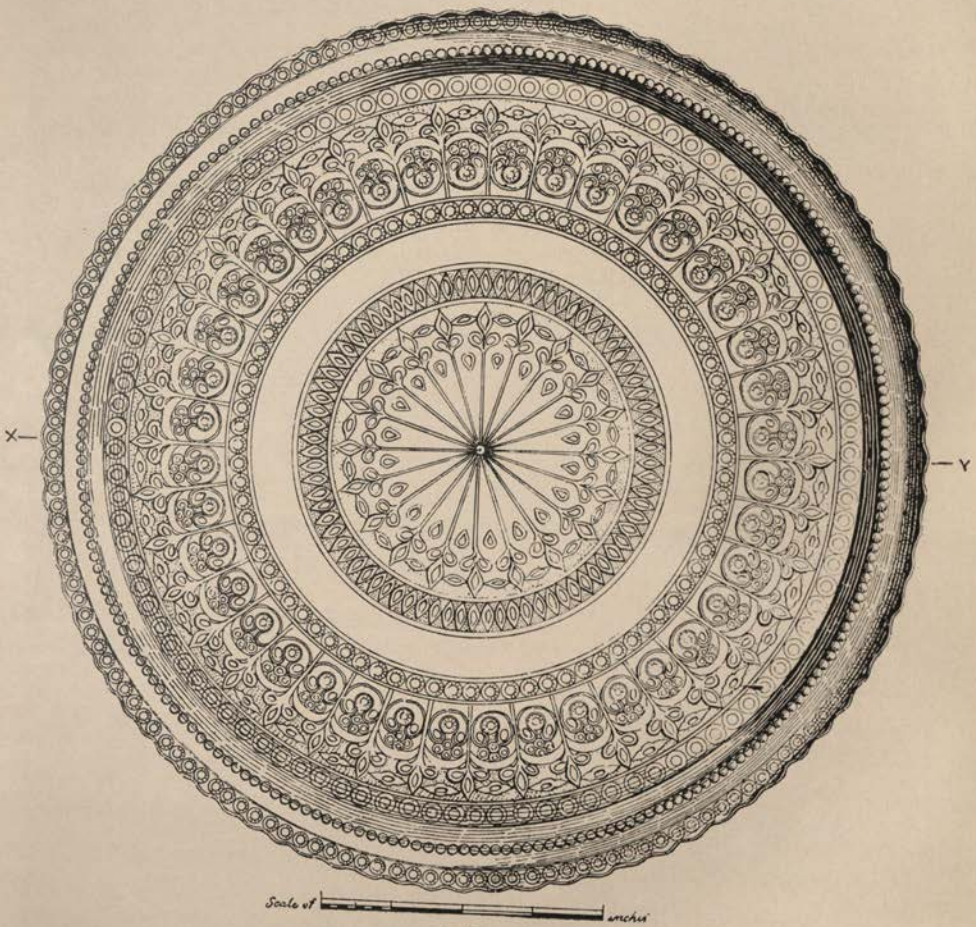
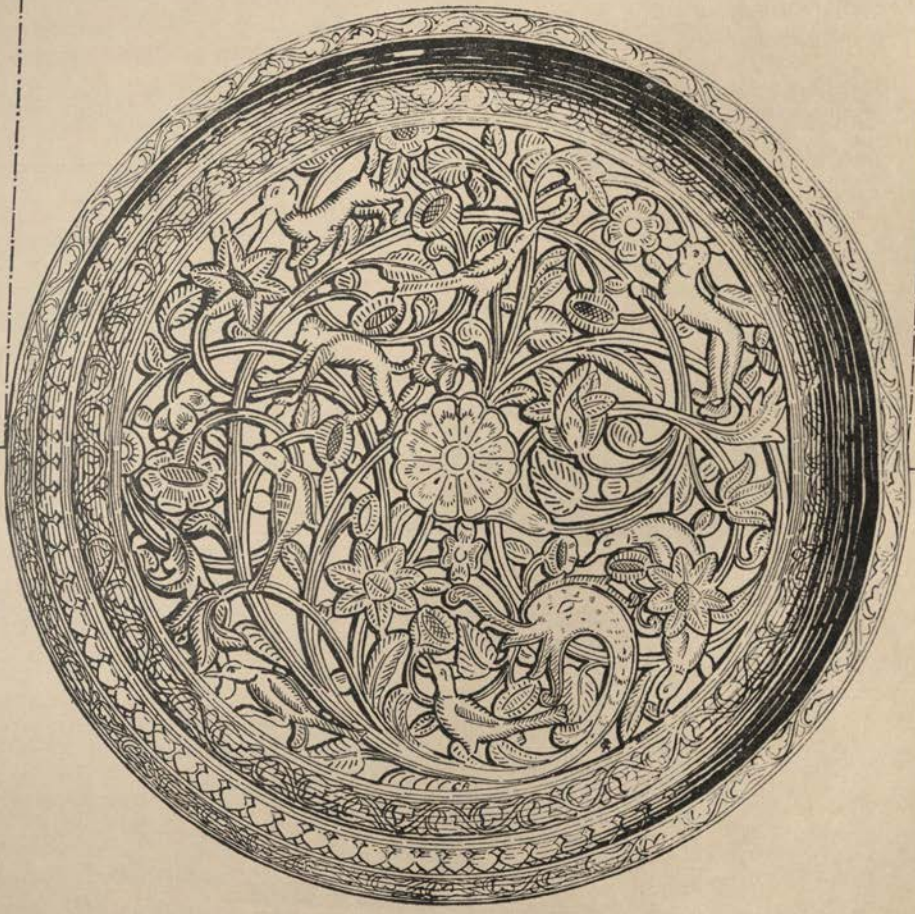


Fig. 85.

Fig. 85.

A brass tray of a common form, decorated entirely with various punches. The edge is turned up at right angles and waved, to strengthen the thin metal. It is in the Government Museum.

SECTION ON A B.



PLAN

Fig. 86.

Fig. 86.

A small brass tray with a well arranged pattern of flowers and leaves and beasts and birds.

The freedom of the growth of the ornament is quite unlike most South Indian Work. The back-ground is pierced as in the large "Vellore" trays.

It is in the Government Museum.

Fig. 87.

Fig. 87.

This brass tray is decorated with a scene from the Ramayana, representing, probably, a fight between Hanuman and Ravana.

The execution is careless, but there is considerable spirit in the action of the figures.

It is in the Government Museum.

Fig. 88.

Fig. 88.

A brass tray ornamented with panthers, antelopes, peacock and a parrot with an eight-pointed star pattern in the centre.

It is a good example of the various sorts of work found on these trays; ornamenting with patterned punches as in the outside rim and border; fluting; scroll patterns and repousse work.

The specimen is in the Government Museum.

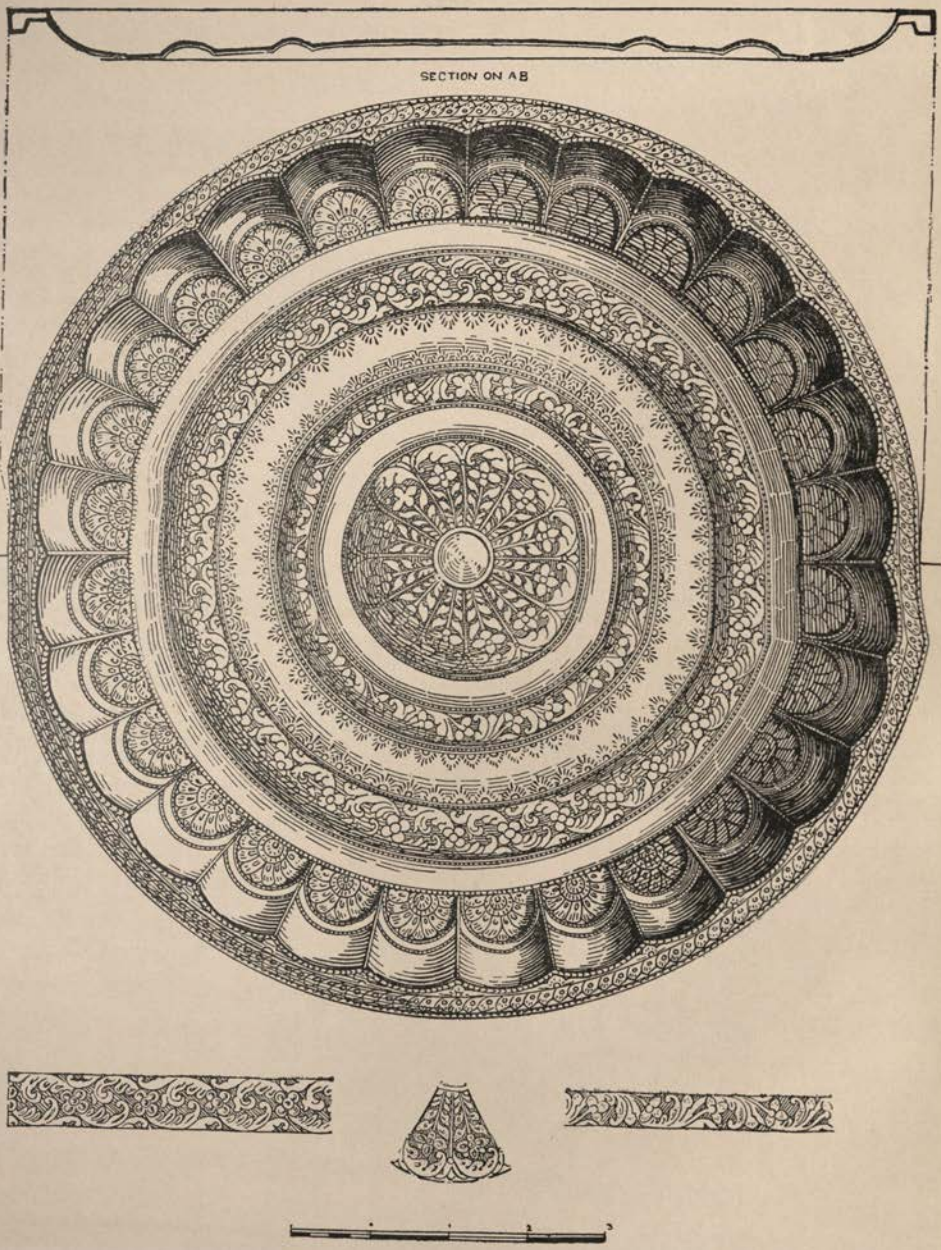


Fig. 89.

Fig. 89.

This tray shews a characteristic method of treating the up-curving edge by wide flutes, which suggests the edges of a flower of many petals.

It is in the Government Museum.

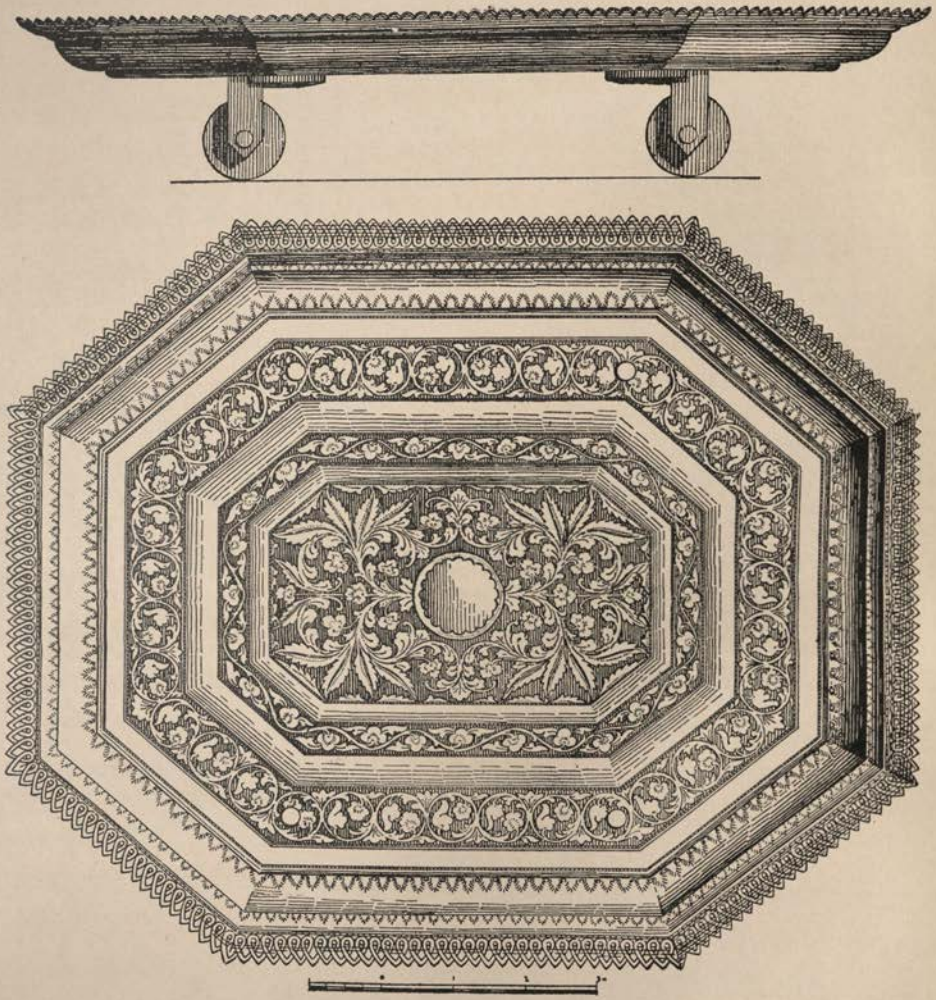


Fig. 90.

Fig. 90.

An octagonal brass tray on small wheels.

The ornament on this, as on so many of these trays, is well arranged but without sufficient interest.

The plain and ornamental borders are too nearly equal in extent, and the saw-like edge is neither pleasant to look upon nor to handle.

Trays of large dimensions on wheels are of frequent occurrence, but examples as small as this, so mounted, are not.

It is in the Government Museum.

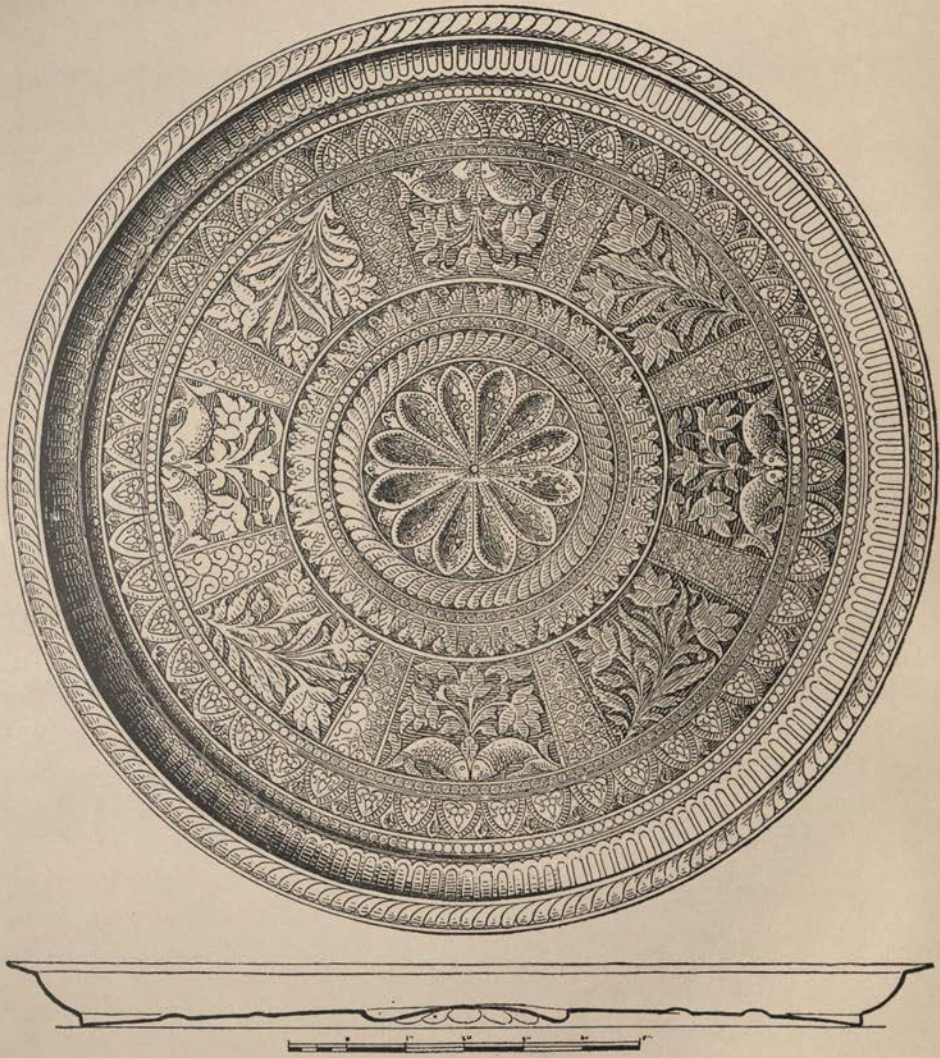


Fig. 91.

Fig. 91.

A brass tray used for sacrifices. The petals of the lotus-like ornament in the centre are hollowed, as shown in the section.

The remaining ornament, done in repousse work in very low relief, consists of eight panels, alternating with fishes affronted and a floral motif, separated by narrow bands.

The number of units, i.e., eight, or a multiple, is a favourite one for dividing a space to be ornamented, in Indian work.

European designers carefully avoid the number when possible, as it is apt to lead to a certain mechanical stiffness.

The specimen is owned privately.

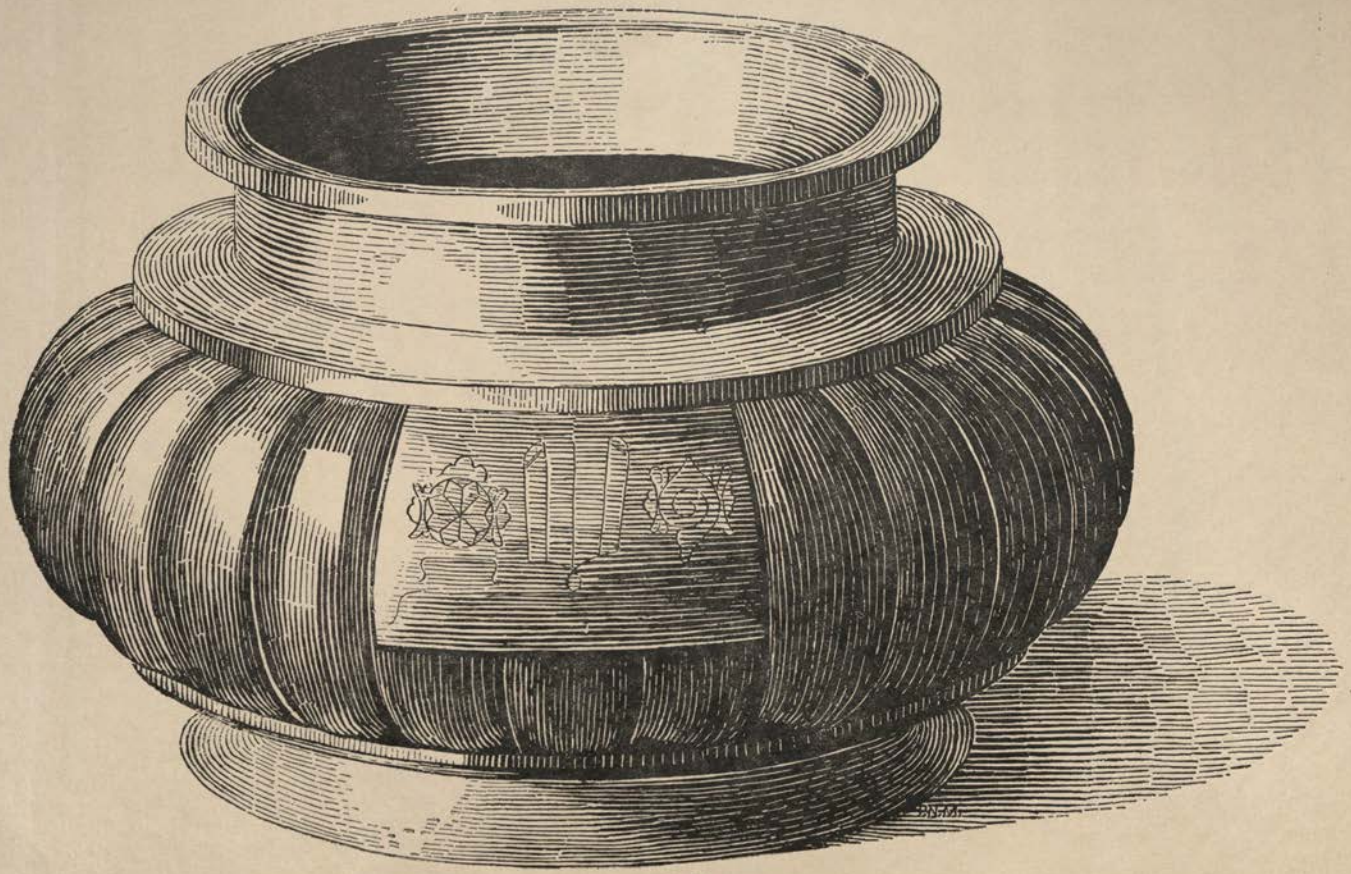


Fig. 92.

Fig. 92.

This copper begger's bowl is the form generally in use in the Vizagapatam district, by Vaishnavite mendicants.

Specimens vary somewhat in outline but most are made of the same general shape, i. e., gadrooned, and suggesting the form of a flat melon.

Covering the tops of three of the gadrooned sections is a flat space with the chukram, nama and chank and below is the owner's name and the word "charity" in Telugu characters.

It is owned privately.

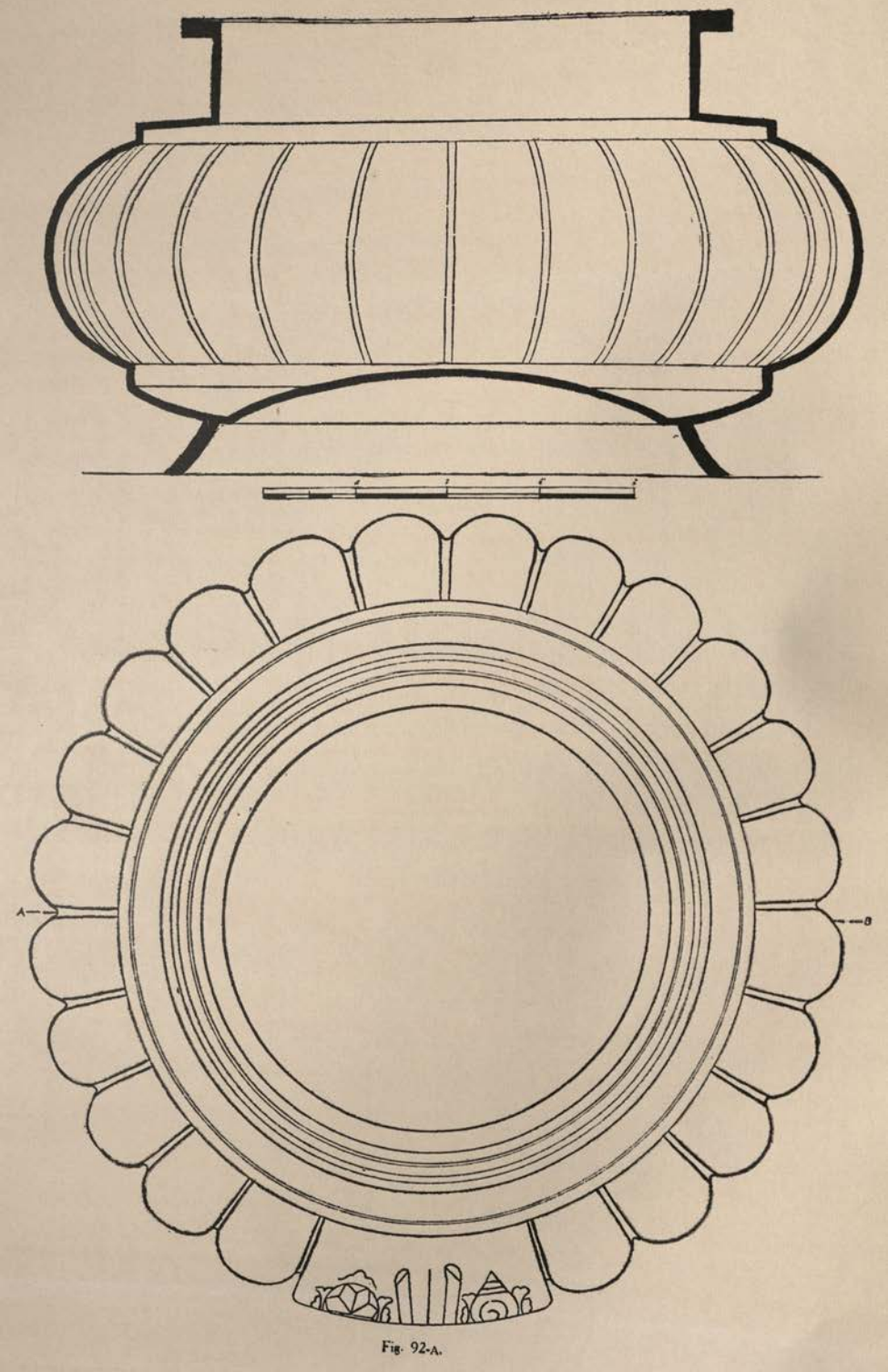


Fig. 92-A.

Fig. 92-A.

These drawings shew the plan and section of the preceding bowl.

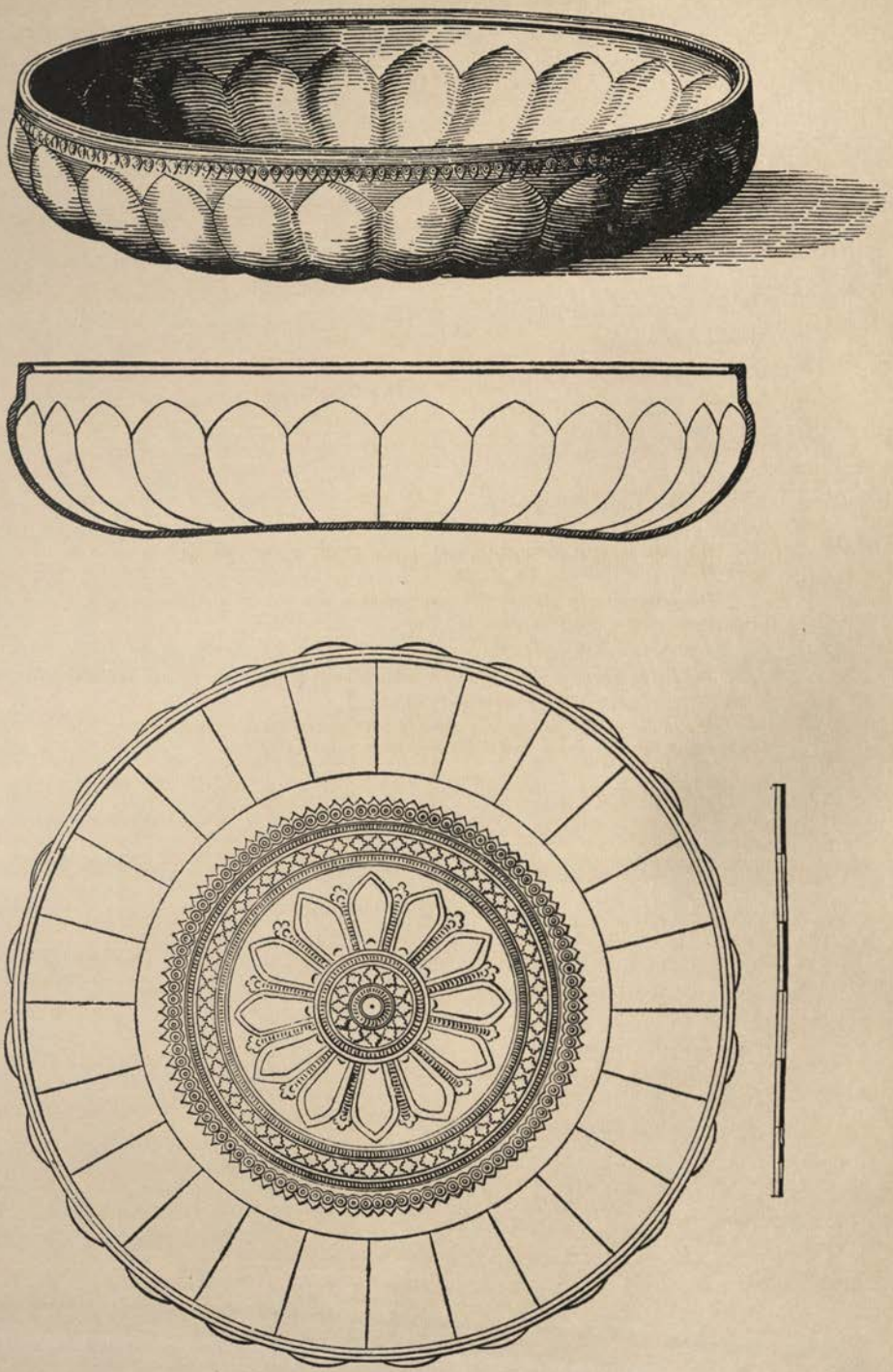


Fig. 93.

Fig. 93.

This second form of begger's bowl is not quite so common as that shewn in figure 92.

The pattern in its general plan and outline is common as a rose-water dish in European countries, generally made of silver.

It is in the Government Museum.

The inside fluting is often omitted and the bowl is then, when plain, very like a tray commonly used by Mussalmans.

The inside of the bottom is decorated with incised lines in the form of a lotus and the edge with a simple border pattern made with a ring tool.

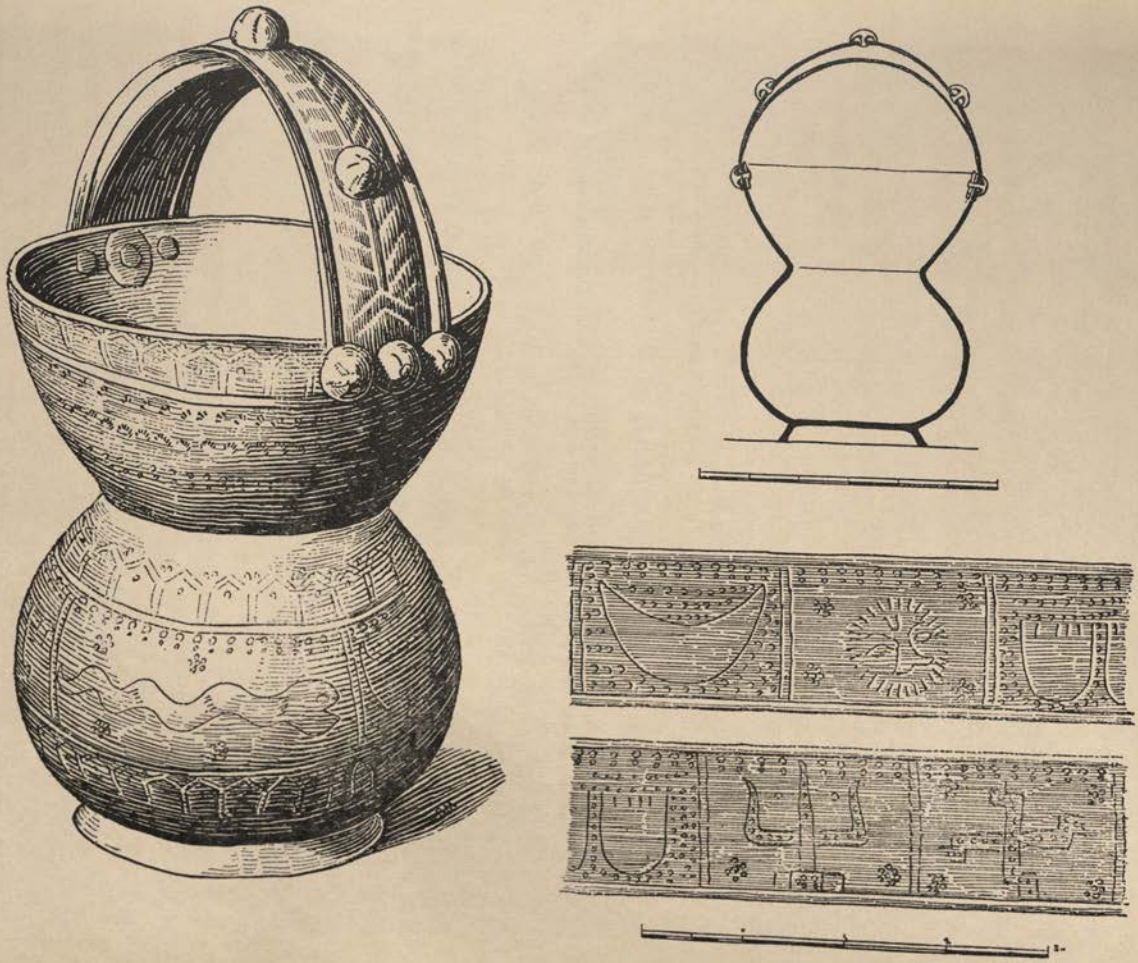


Fig. 94.

Fig. 94.

This third form of begger's bowl is that commonly found in Northern India.

This specimen from the Government Museum is of brass and roughly worked.

The shape is that of a double gourd with two sections cut from one end to leave a handle.

It is ornamented with various religious emblems, the cresent, sun, trident, swastika, and naga (or serpent).

BACK

PLAN AT. A.

FRONT.

0" 1" 2" 3"

SIDE

Fig. 95.

Fig. 95.

The following eight figures of cast brass are fairly well known from having been so frequently reproduced.

The examples illustrated are all from the Government Museum collection.

A similar set was given to the late King-Emperor Edward VII when he visited India as the Prince of Wales, and these were exhibited for many years in the Indian section of the Imperial Institute in London.

Sir George Birdwood illustrated a number of them both in his "Industrial Arts of India" and later in the "Journal of Indian Art".

After much enquiry as to their age and origin, Mr. P. T. Srinivasa Iyengar of Vizagapatam, who has taken a great interest in the matter, has kindly furnished me with the following details :—

"They were made at Peddapuram, a town in the Godavari district, between Rajahmundry and Pithapuram, by an artist of the house name of Adimurti. There were two brothers Virachandracharlu and Viracharlu, the former, the elder, being reputed to be the better workman. Both were in the service of Raja Timma Jagapati IV of Peddapur, who employed them to make brass images to avert his threatened death, by presentation of these images to Brahmans as prescribed by his astrologer.

"This Raja died in 1796."

We may assume, therefore, with some certainty, that the figures were made during the latter part of the eighteenth century. The costumes also bear out *this assumption.*

Another story concerning them is to the effect that the Raja's astrologer suggested that to have a review of an army each day without shedding blood would have the required effect, of averting his death.

The two stories may perhaps both contain parts of the truth.

The actual figures in the Government Museum were purchased by an ancestor of Mr. G. L. Narasinga Rao (who presented them to the Museum) early in the nineteenth century.

The figure 95 represents a matchlock man, mounted, in full armour.

The care with which every detail is worked out should be noted, as these small figures are marvels of patient and devoted artistic work. They grasp so well the spirit of their subject that one quite properly puts aside all thought of their being accurate anatomical horses or men. We get more of the feeling and spirit of militaryism in a half-dozen figures of this character than in a whole army represented with the greatest precision and accuracy as to anatomical exactness.

Fig. 96.

Fig. 96.

A cast brass figure of a mounted tharvar.

Like the portrait painter, the artist has seized on the individual points which go to express his idea of the sort of person he is representing.

Even though the swagger of the figure and his exaggeratedly upright position may be next to impossible anatomically, still the feeling that he is important and wishes to convey that fact to others is strikingly represented.

There are probably no artistic works in the way of figures in India, which are so full of expression as are this group of subjects; but even here, the expression is confined more to the postures than to the faces.

BACK

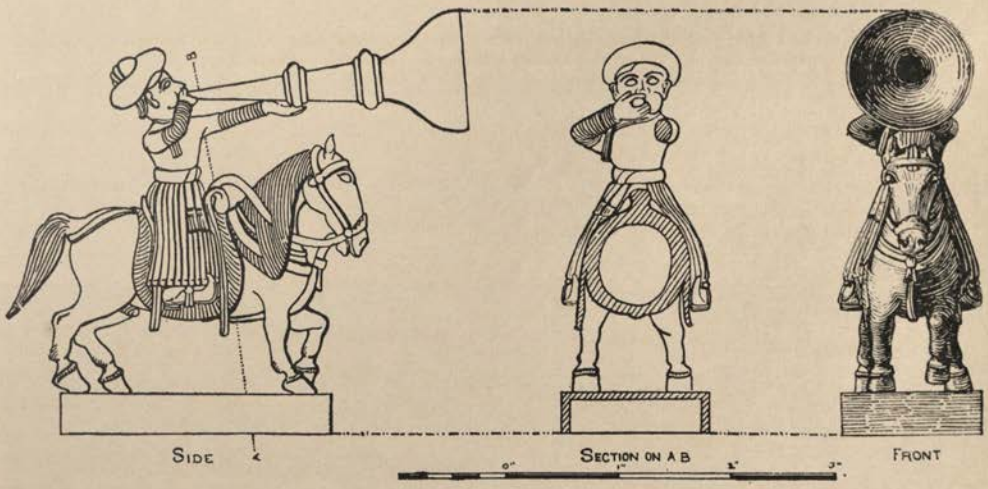


Fig. 97.

Fig. 97.

A figure of amounted trumpeter.

In this example so much is sacrificed to the size of the horse that it becomes almost a caricature, but the figure is, however, one of the most amusing of the group.

In all these horsemen much that is inaccurate as regards proportion of both figures and horses is easily traced through the entire group. The smallness of the horses' heads, the exaggerated length of the body compared to the height of the horse and the modelling of the ears and hoofs are all far out of proportion. The stumpiness of the figures, which is more apparent than real, is due somewhat to the thickness of the armour.

As Sir Geo. Birdwood writes ("Industrial Arts of India" page 162) these figures graphically illustrate "the whole gamut of military swagger in man and beast."

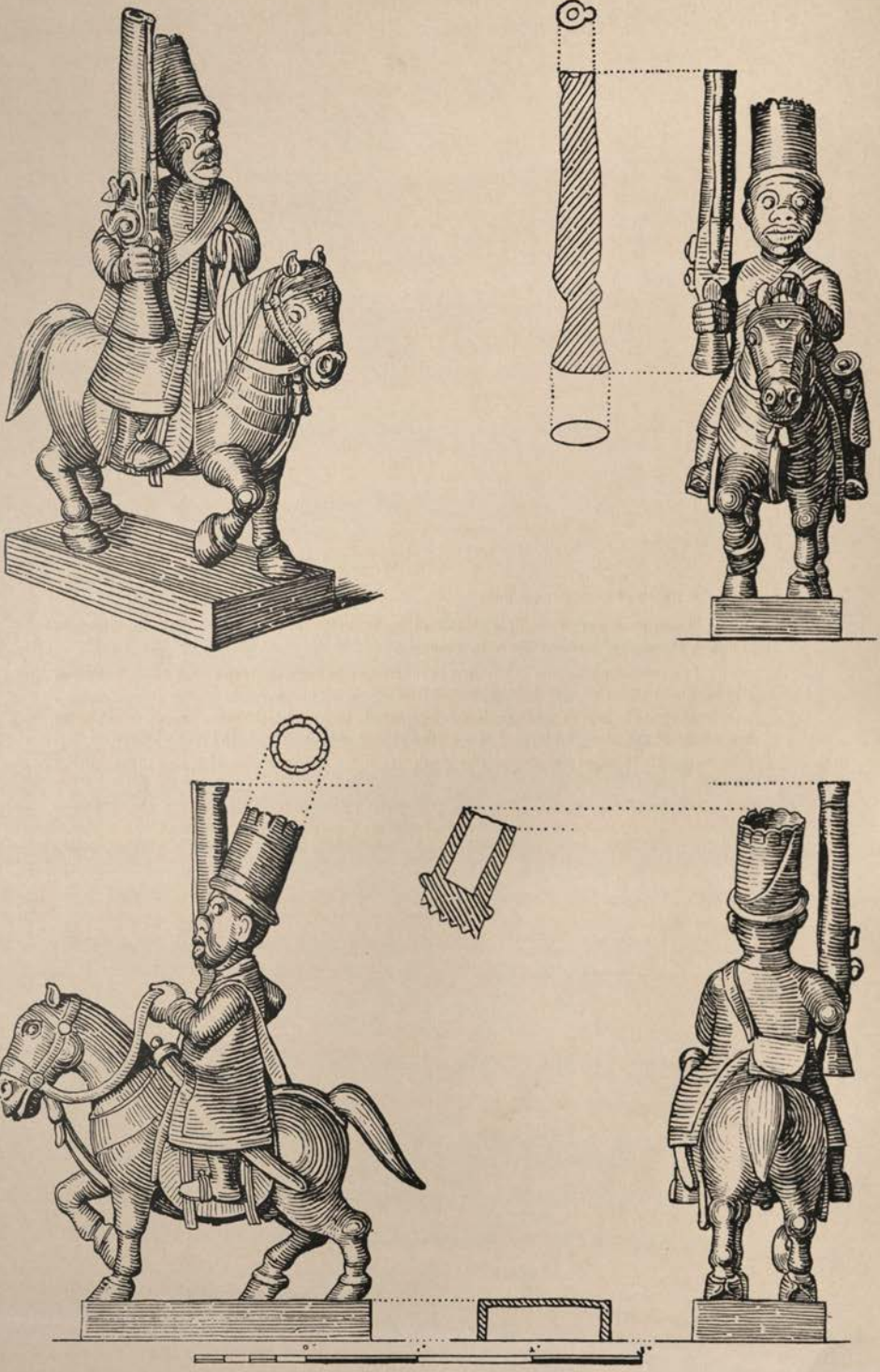


Fig. 98.

Fig. 98.

A figure of a Negro carbineer.

The type of face with the exceedingly wide and flat nose and thick lips at once proclaim the owner to be of African origin.

The blunderbuss and the curious head gear which apparently begins as a top hat and finishes as a crown are points to be noticed.

Africans in the service of the Deccan rulers are still not infrequently met with, and no doubt in older times they were used as mercenaries.

Fig. 99.

Fig. 99.

A figure of a matchlock man, carrying also a quiver and bow, mounted on a camel.

The action of the camel adds much to the interest of this figure.

The accuracy with which the matchlock and bow are rendered speaks well for the artist's observation, as regards these arms, but the same cannot be said concerning the anatomy of the camel.

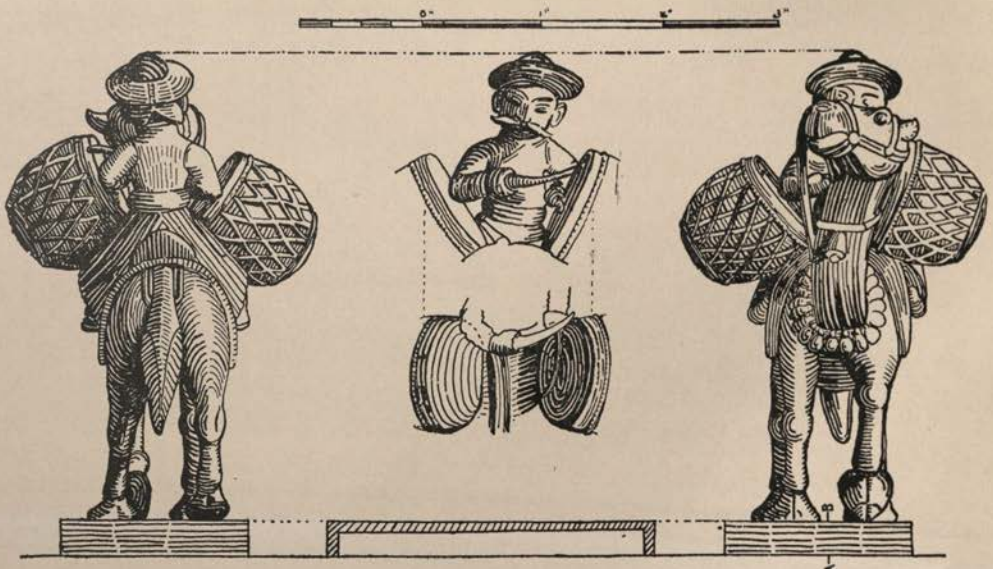


Fig. 100.

Fig. 100.

A figure of a drummer mounted on a camel.

The variety of the head gear of all this group is noticeable. In this, the sedate walk of the beast contrasts well with the prancing importance of the camel in the previous example.

Every detail of the trappings on both horses and camels in this group of figures is rendered with great care and delicacy.

There is an elegance about all the finish of the work which is in striking contrast to the effective, if some what crude workmanship displayed on the majority of brass toys.

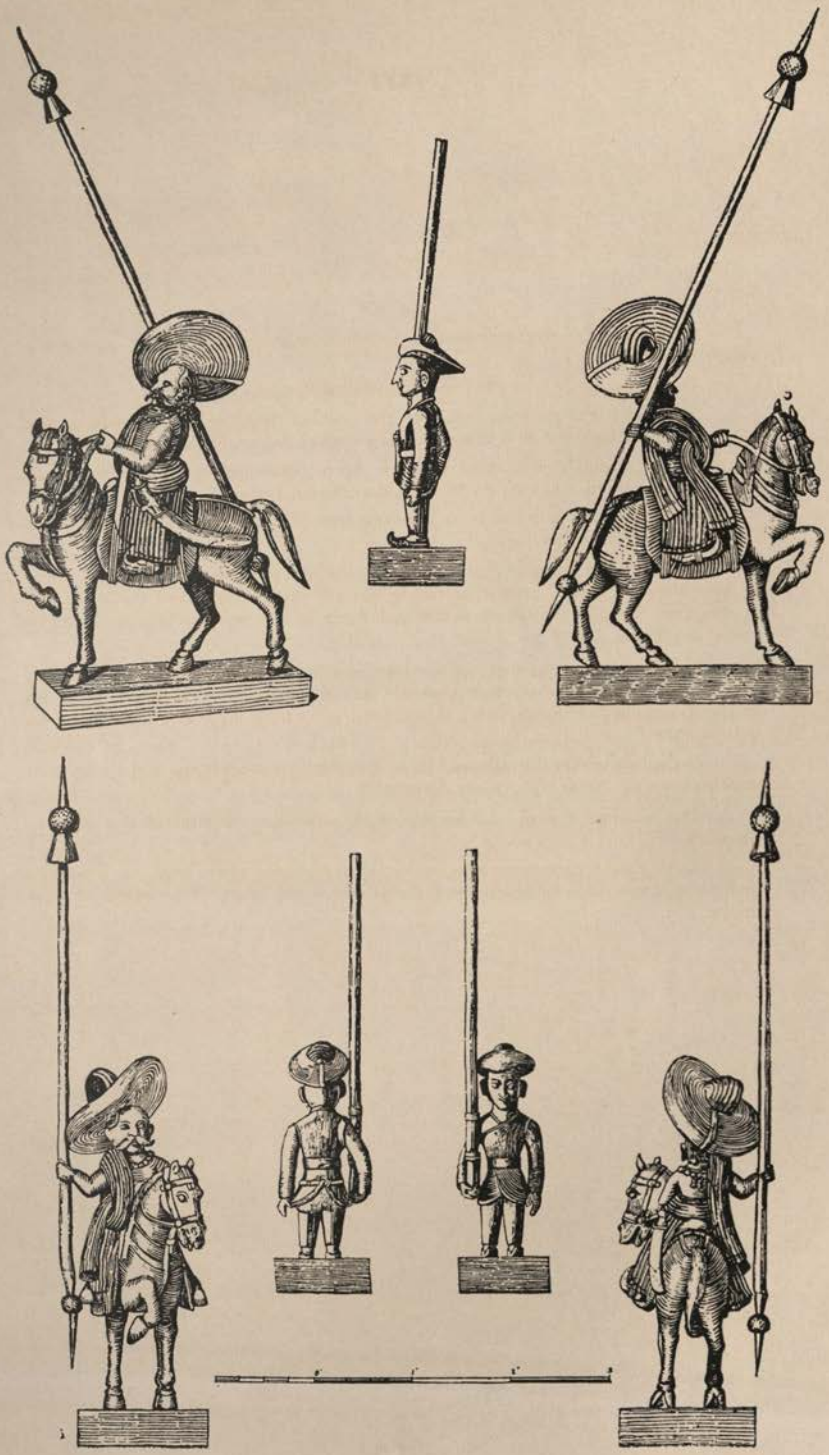


Fig. 101.

Fig. 101.

The mounted figure represents a spearman or lancer who is also armed with a sword.

The smaller figure is of a foot soldier armed with a long gun.

The large size of the turban worn by the mounted figure should be noticed and the action of the horse which is almost that of a modern fashionable hackney.

Of the considerable number of these figures examined in various places, an unusual characteristic is the variety found in the different types.

In cast work made in quantities, the usual method in the West is to mould from one pattern by piece-moulding.

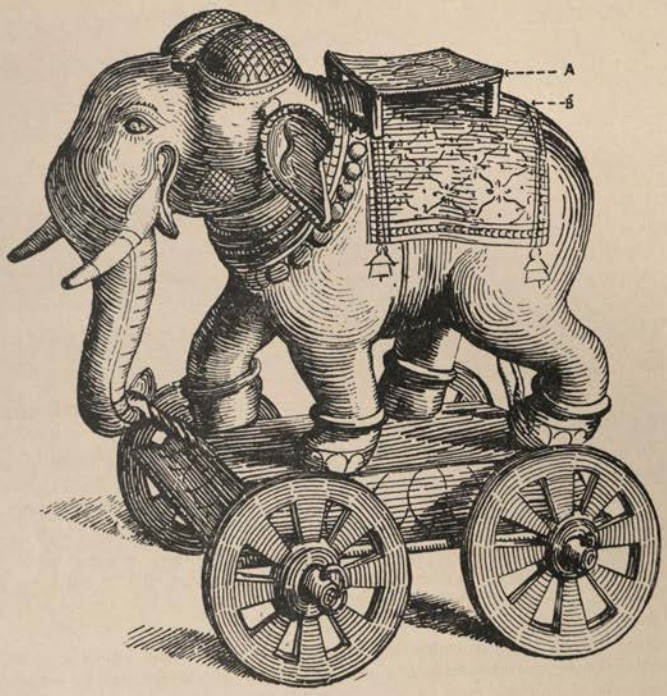
The result is a group of figures practically identical in movement and detail; while by using the "cire perdu" process, no two figures are exactly alike, and the artist has much greater scope for his talents, in that each figure, as it is modelled separately, can be varied at will.

Another figure of a foot soldier (not here illustrated) is dressed in a French uniform and carries a gun with fixed bayonet, and still another, which completes the group in the Government Museum, is of an elephant, which bears a standard terminating in a gigantic hand.

In the foot soldier, the smaller figure, the ridiculous proportions of the man, who is only about four heads high, is very noticeable.

The mounted figures also are but little taller but the disproportion is not so apparent.

Leaving aside inaccuracies or anatomy, one cannot but admit that the quaintness and charm of this group of figures and their naivete is the mark of an artist of great ability.



PLAN AT A

PATTERN AT B

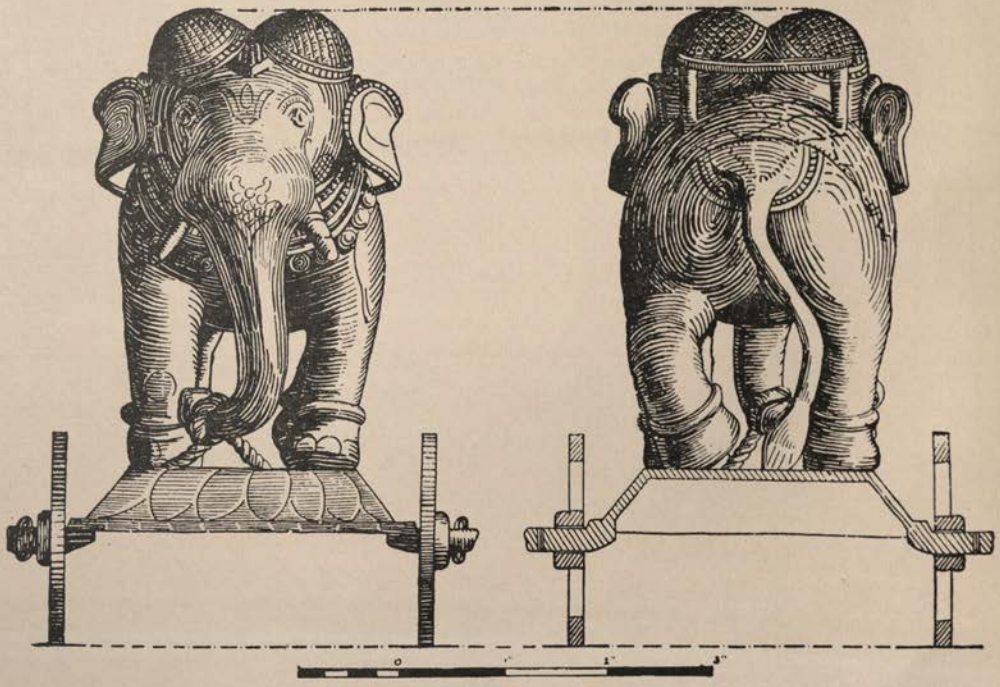


Fig. 102.

Fig. 102.

A cast brass toy, in the form of an elephant, mounted on wheels.

Toys of this character are very common and usually are in the form of horses, cattle or elephants, sometimes with a mounted figure, as in figure 104, and often, as in this example, with a platform on which a small image of a deity may be placed.

Many are most carefully modelled and finished and are veritable works of art, while others are crude in workmanship even though they nearly always possess some more or less striking individuality.

This and the following examples are in the Government Museum.

Fig. 103.

Fig. 103.

A cast brass toy in the form of an ekka, drawn by a bullock.

The elaborate detail of this toy may be well seen in the drawing.

It is an excellent example of its class. Although the general character of the modelling and workmanship seem at first glance to be South Indian, the form of the vehicle is that of the common "ekka" of the North, quite unusual in the Madras Presidency.

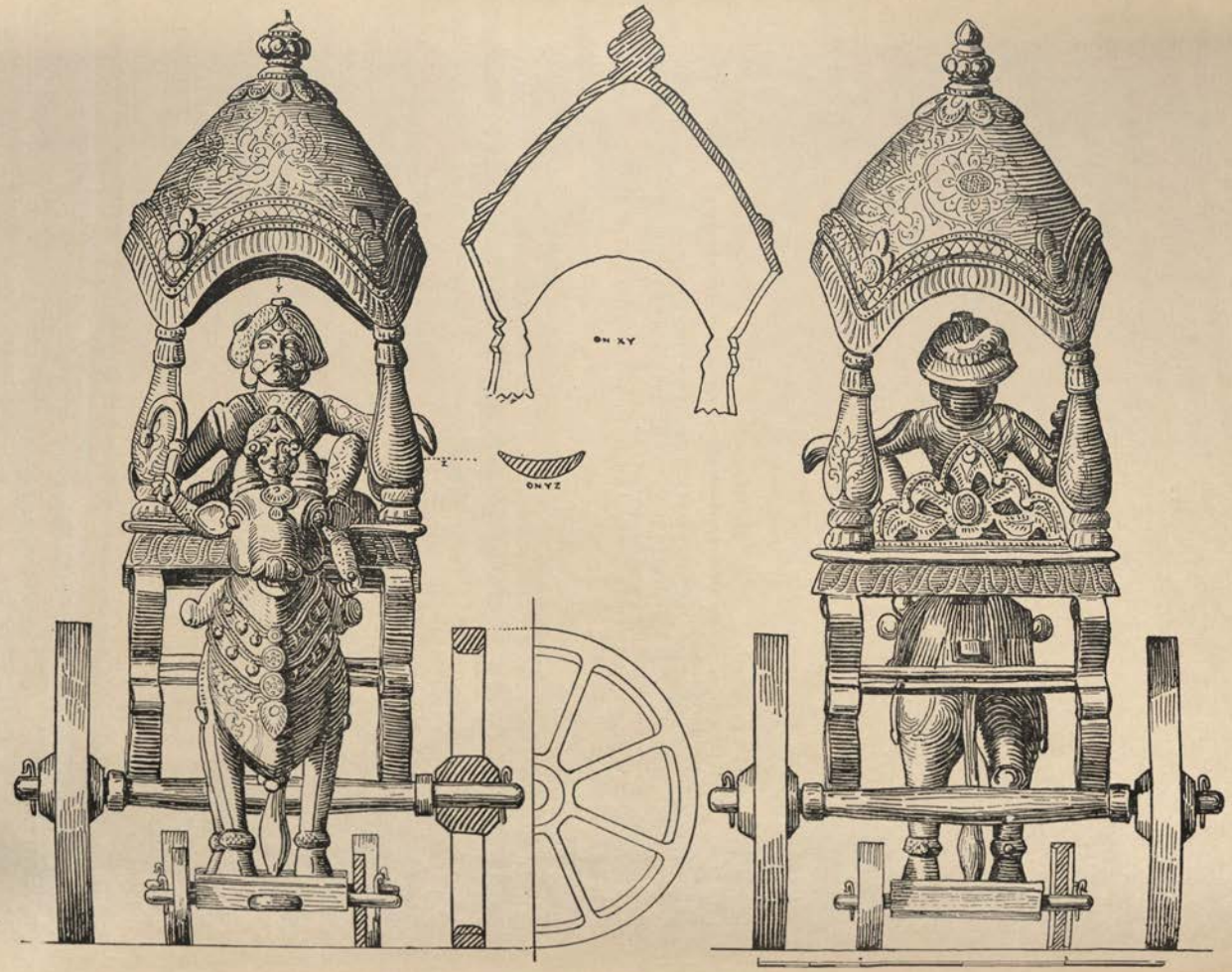


Fig. 103-A.

Fig. 103-A.

The drawings shew the details and section of the previous figure, and a front and back elevation of it also.

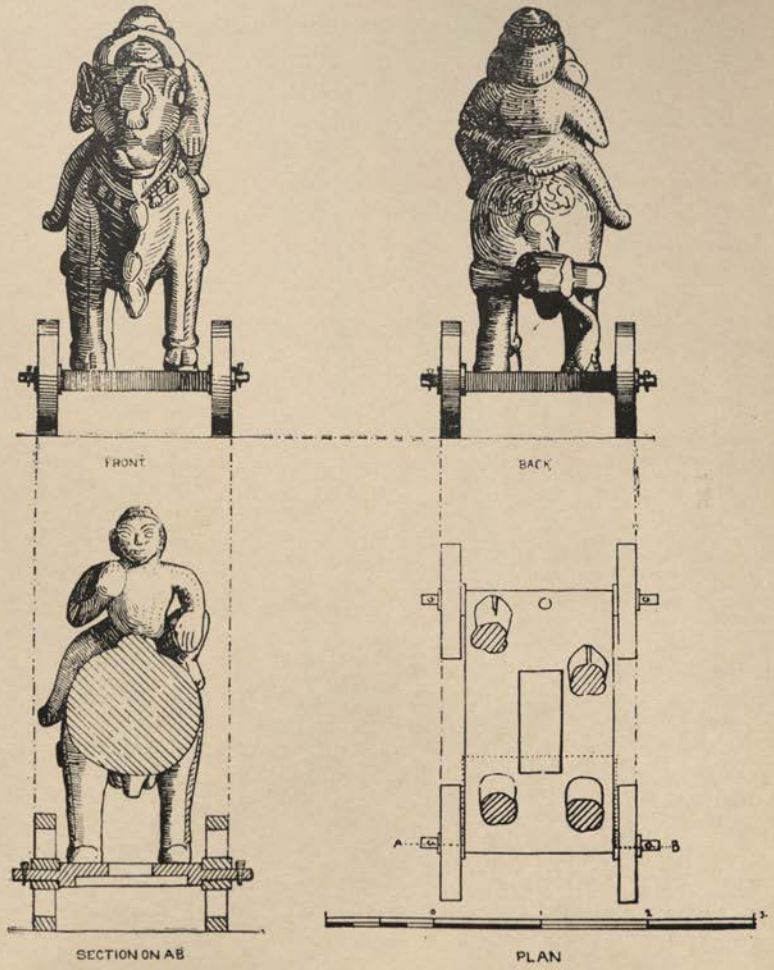


Fig. 104

Fig. 104.

A cast brass toy of a man riding on a bull, on wheels. The modelling is coarse and clumsy.

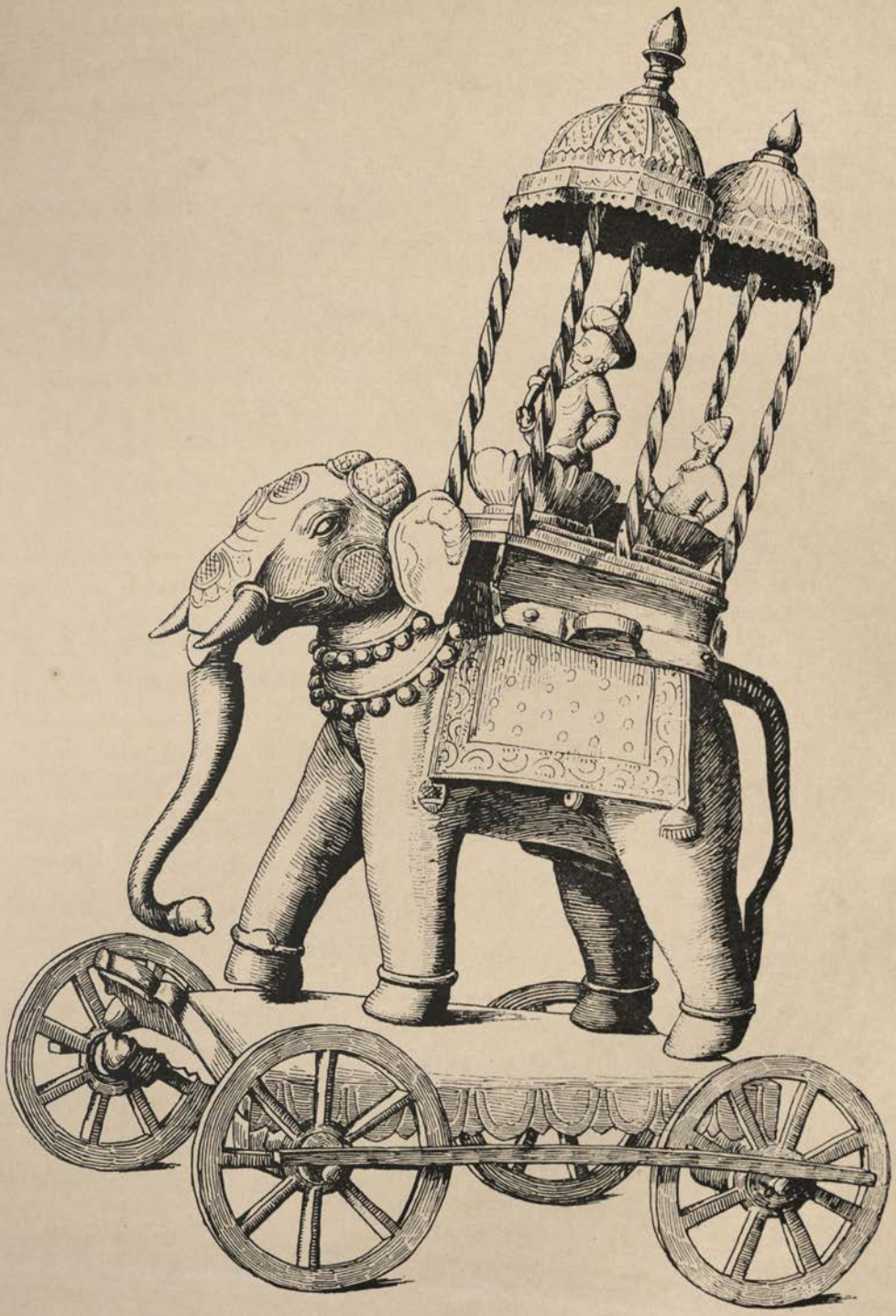


Fig. 105.

Fig. 105.

A cast brass toy elephant, with howdah and two figures, a Raja and his attendant, mounted on wheels.

This is another example of an elaborate toy, well modelled, but not particularly well finished.

The trunk of the elephant is jointed and swings to and fro as the toy is moved along.

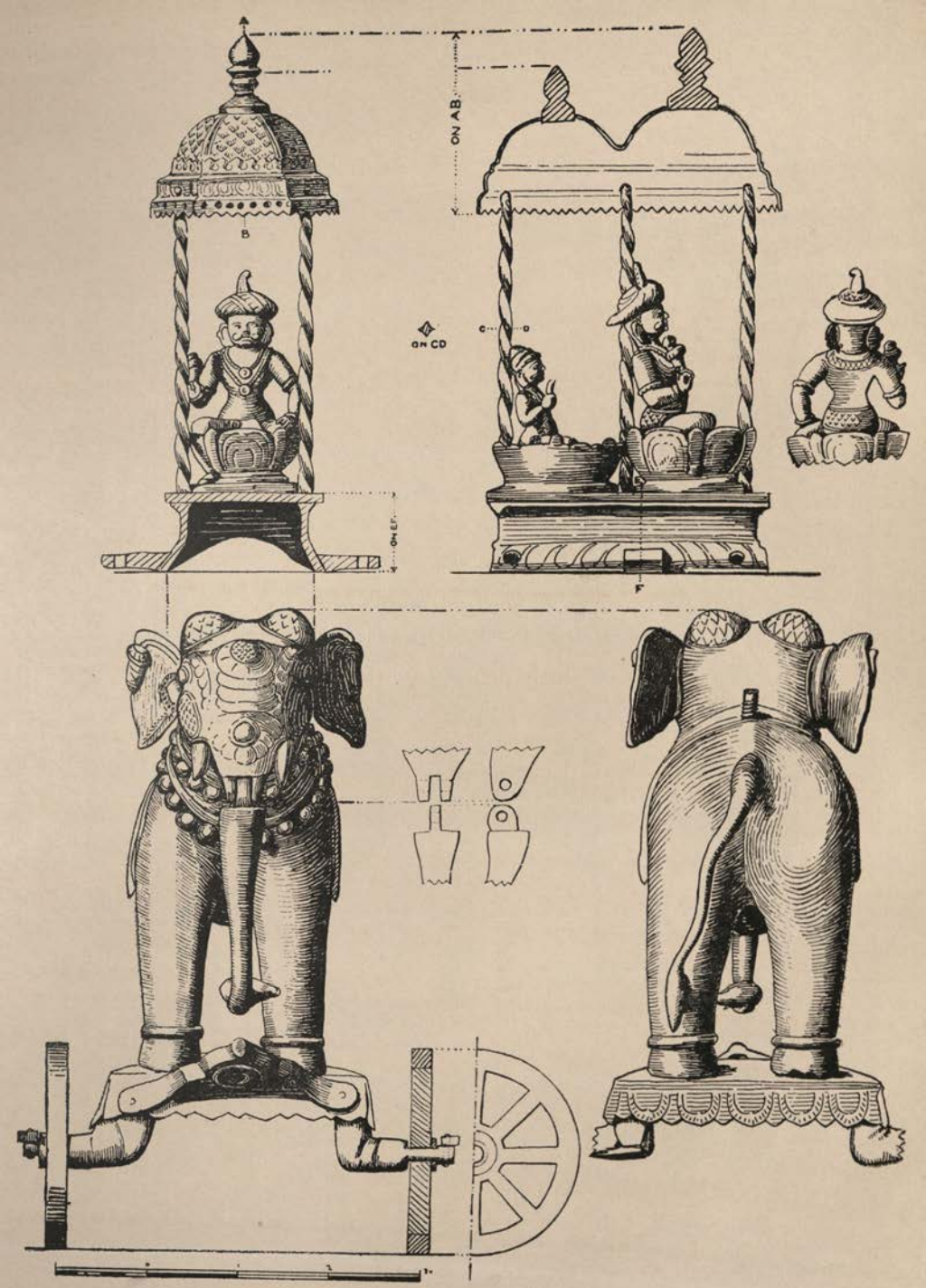


Fig. 105-A.

Fig. 105-A.
These drawings shew the details of the preceding figure.

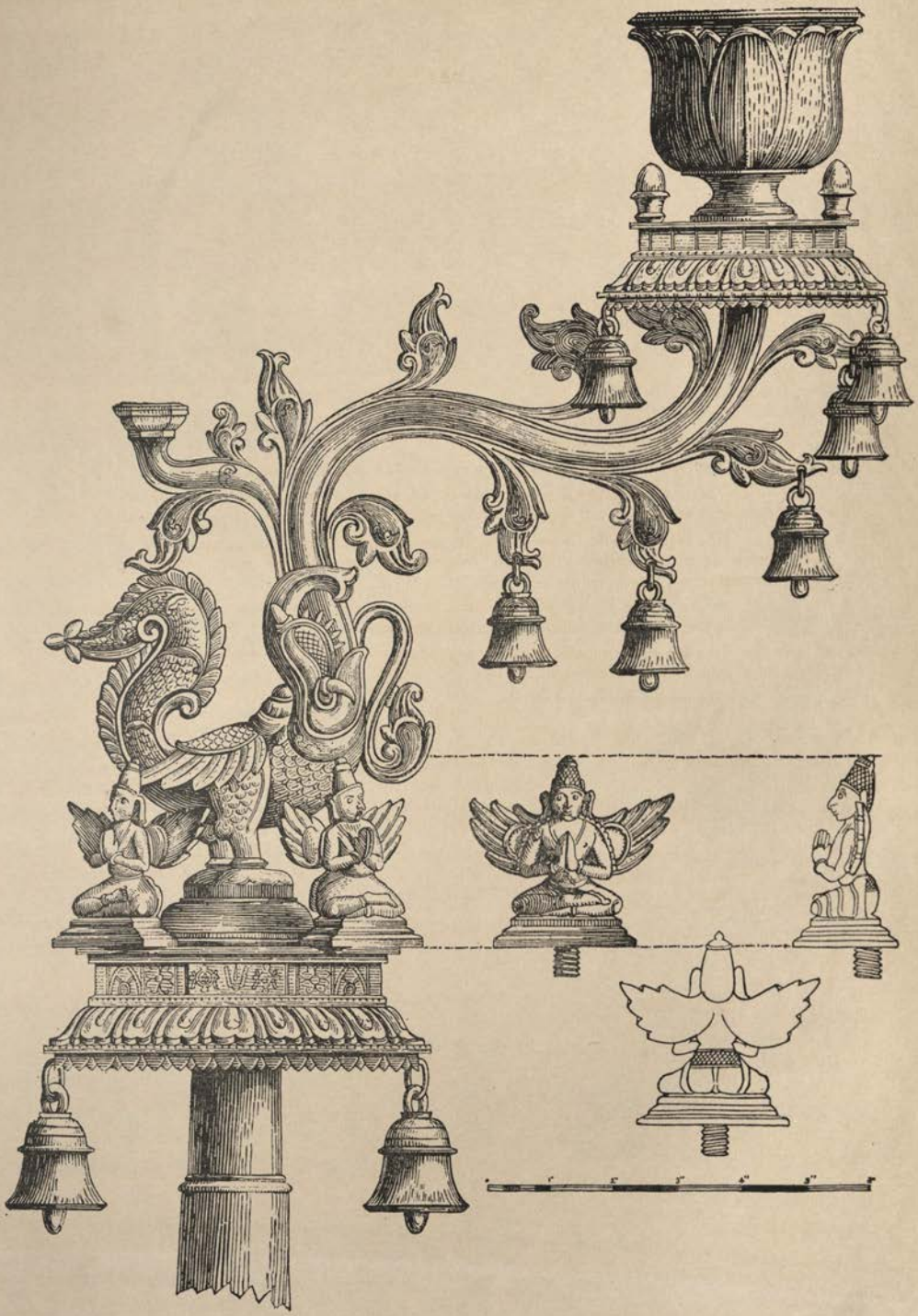


Fig. 106.

Fig. 106.

A cast brass cresset.

This and the other three examples are all in the Government Museum.

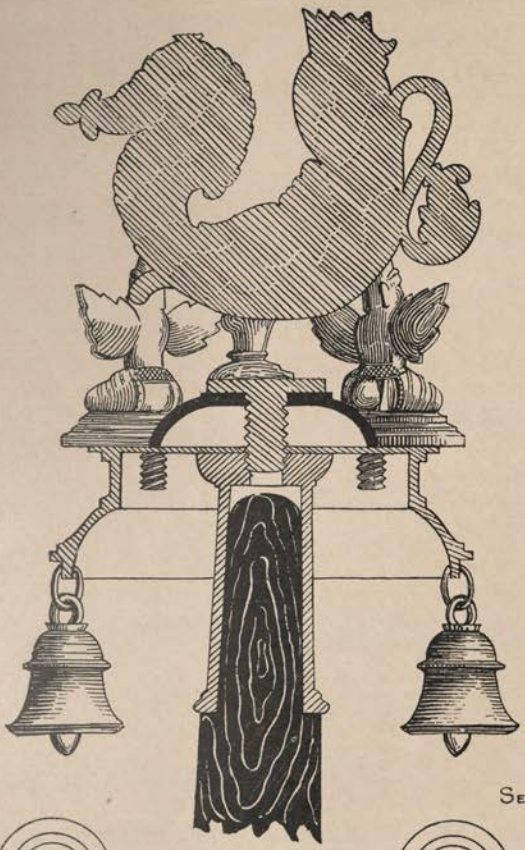
The drawing shews a good specimen of these ornamental torches which are used by devotees for carrying in religious processions.

The square base, from which is suspended four bells, has at each corner a figure of a Gandharba, a celestial chorister represented with wings, and doing "namaskaram".

In the centre of the pedestal is a "sea monster bird" from whose mouth protrudes a curved arm which supports the fire-pan.

The arm of branch also has bells suspended from it, and the whole is supported on a pole, four or five feet in length.

The workmanship is excellent.



SECTION ON AB

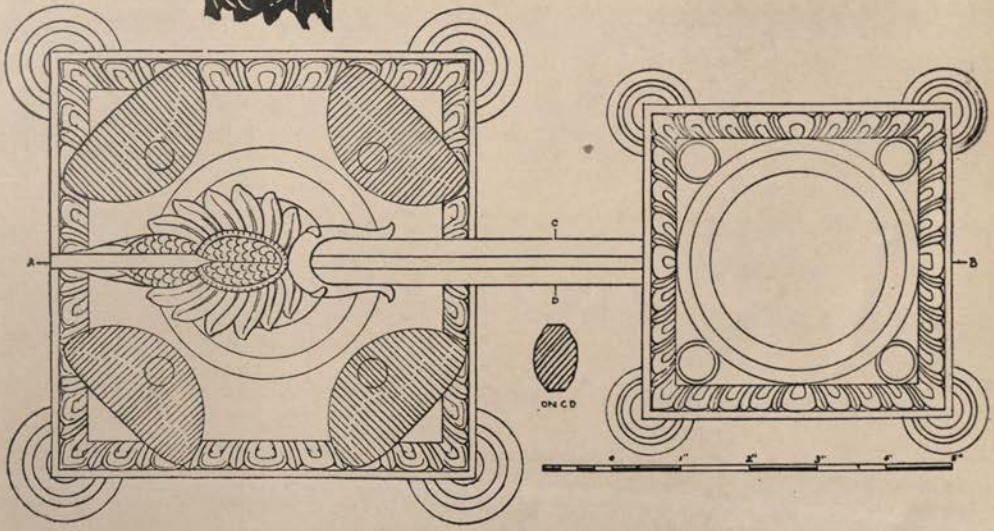


Fig. 106-A.

Fig. 106-A.

This shews the sections, plan, and details of the cresset, figure 106.

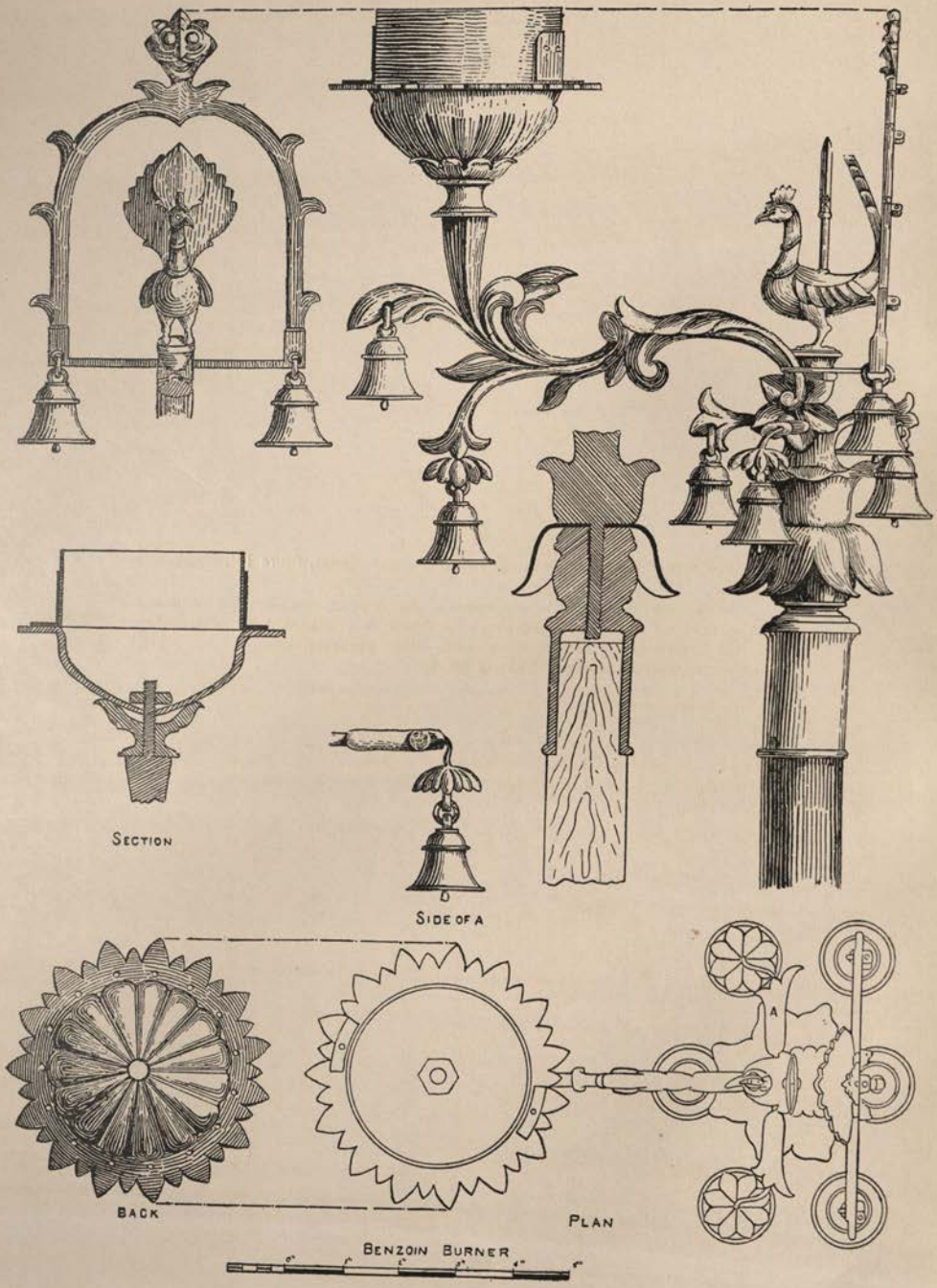


Fig. 107.

Fig. 107.

The cresset in this figure is somewhat similar in general form to the previous example.

In this one, the branch which supports the fire-pan, springs from a flower form at the head of the shaft, and above the flower is a peacock with outstretched tail, and a surrounding arched frame work with grotesque head at top, which resembles somewhat the shrine backs of deities.

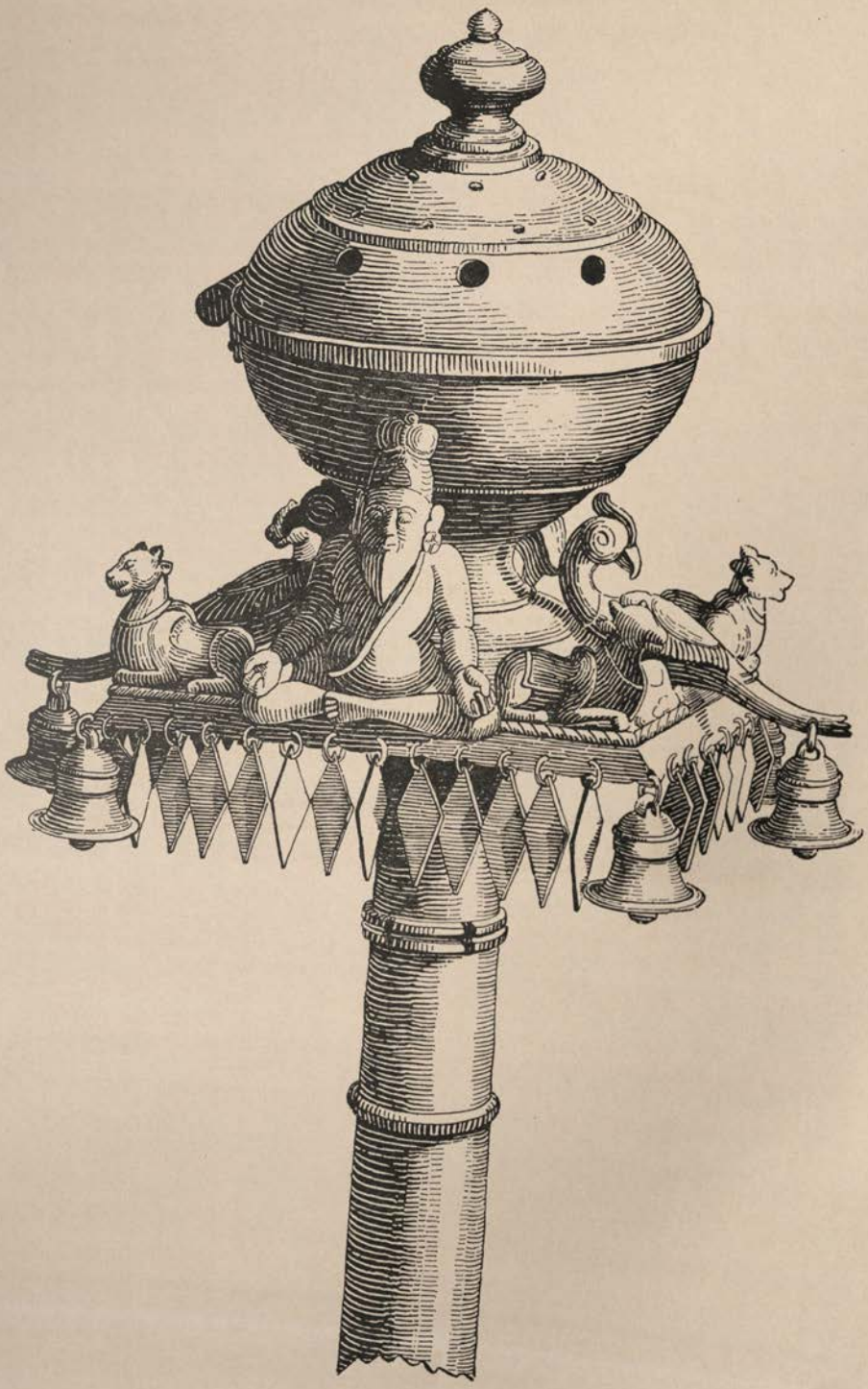


Fig. 108.

Fig. 108.

A hammered and cast brass cresset.

Unlike the two previous examples, this one is supported directly over the top of the shaft.

A circular vessel with pierced cover is supported on a square base decorated with parrots, bulls, and a figure of a saint or rishi. From the base, diamond-shaped pendants and bells depend.

The bulls with two bodies and a single head, is a characteristic form of a corner ornament.

These covered cressets are generally termed "benzoin burners."

This is an excellent example, as indeed are nearly all these cressets, of carefully designed and wrought metal-work.

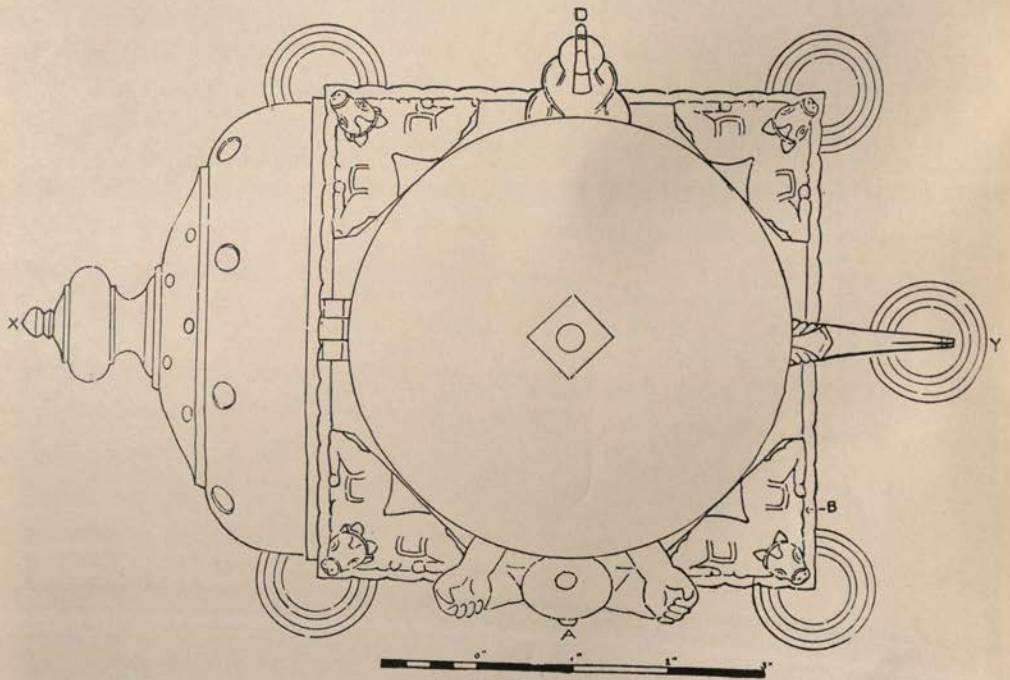


Fig. 108-A.

Fig. 108-A.

The drawing shews the plan and some of the details of the preceding figure.

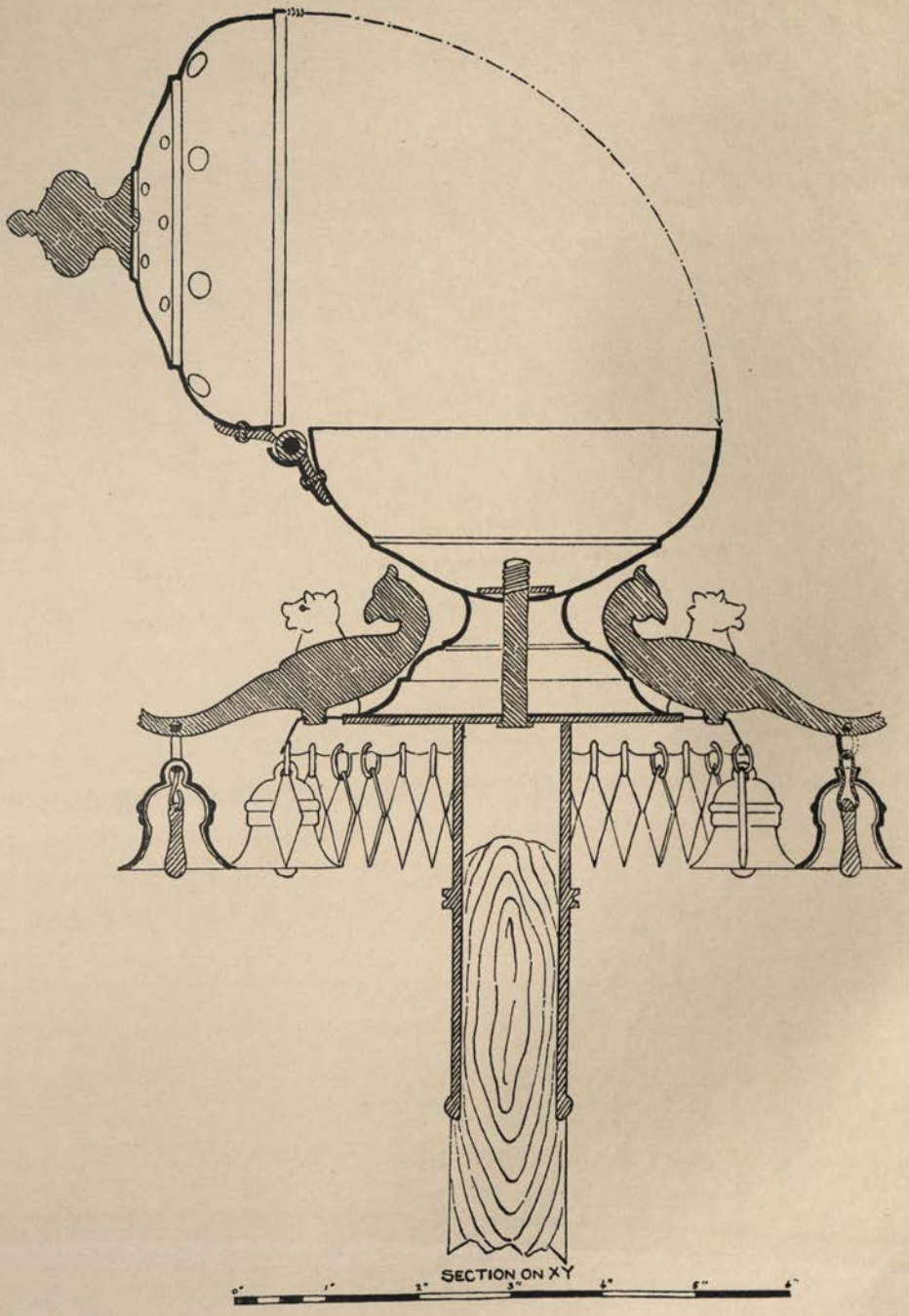


Fig. 108-B.

Fig. 108-B.

This drawing shews the section of figure 108.

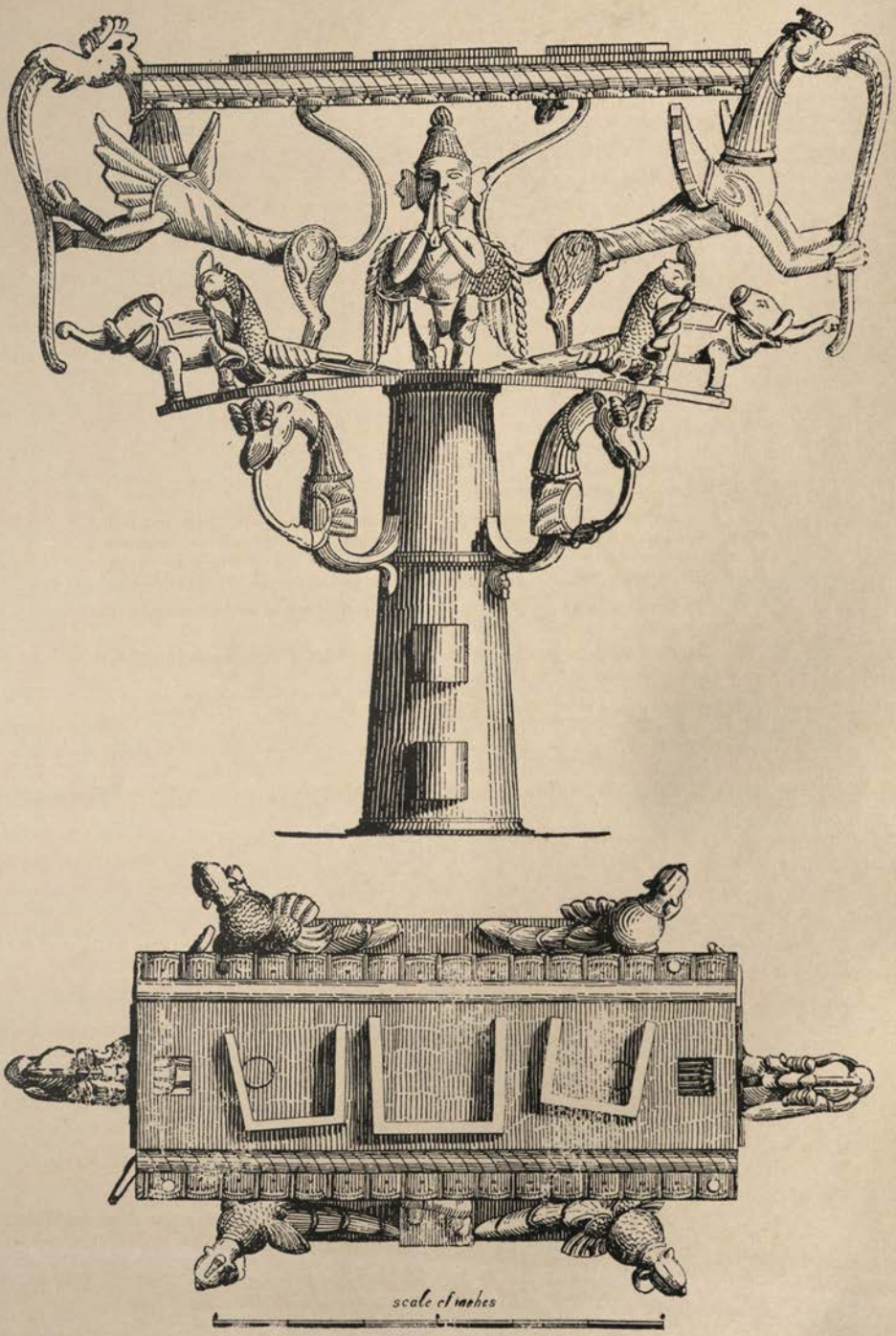


Fig. 109.

Fig. 109.

A cast brass cresset, incomplete.

This is probably the ornamental lower section of a cresset with the branch which should support the fire-pan missing. These articles are generally made of many pieces fitting one into the other, for convenience in finishing, and the small rings at the side of the shaft are probably intended to receive the lower part of the arm of the fire-pan.

The curious grotesque ornamental beasts, especially the small elephants with bulls' heads looking backward, should be noticed.

The stand itself, as seen by the top plan, is intended to hold figures, probably of Vishnu and his wives, which slip into the slots indicated.

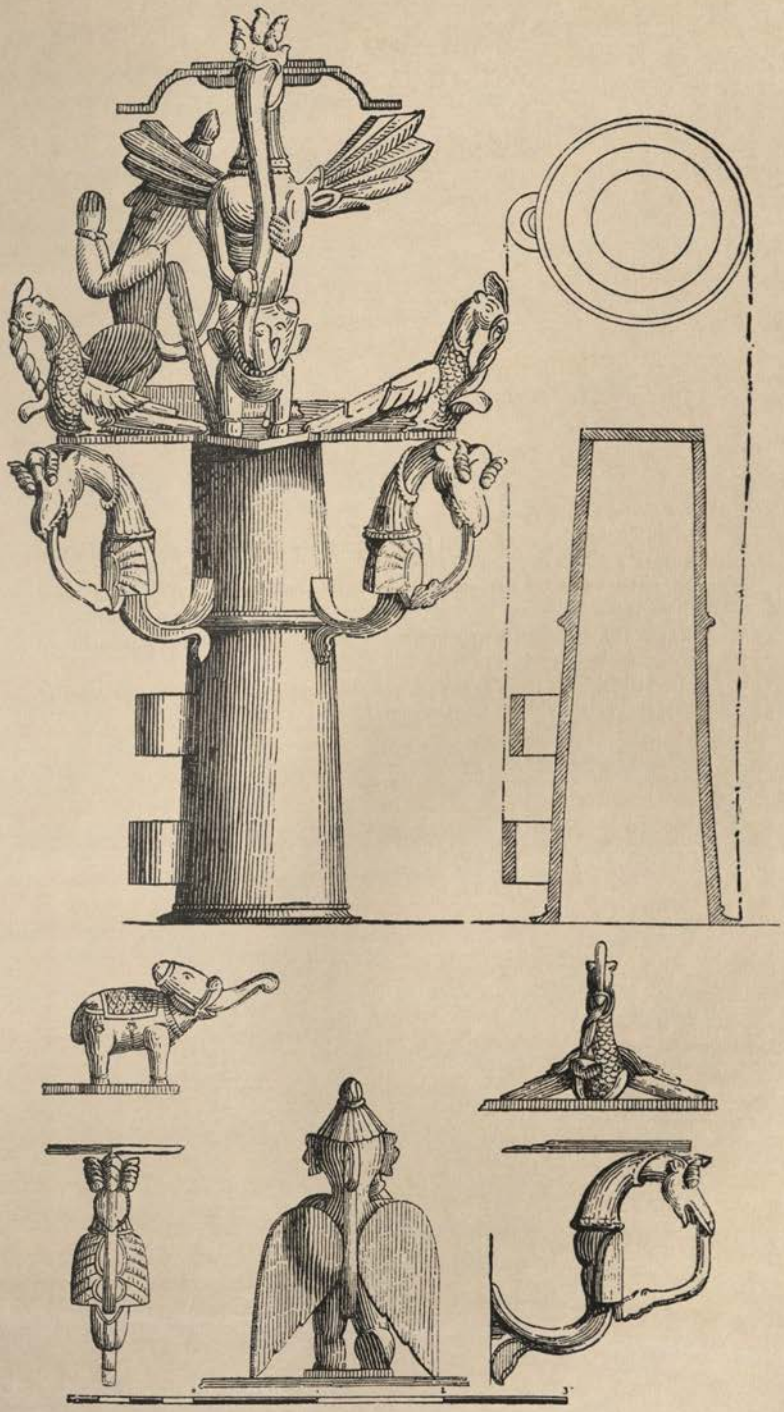


Fig. 109-A.

Fig. 109-A.

This shews the side view and details of the previous figure.

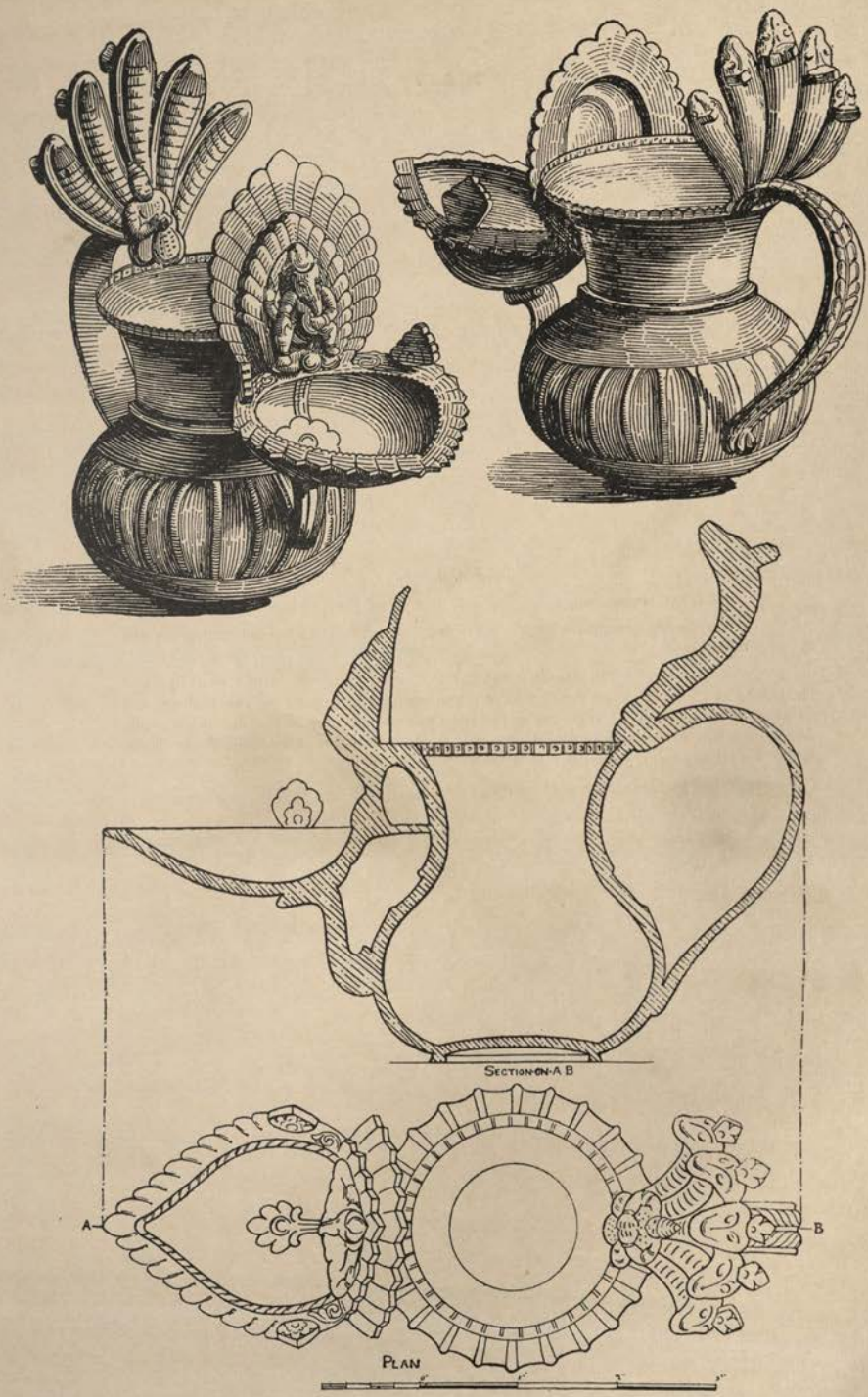


Fig. 110.

Fig. 110.

A cast brass lamp.

The jug-shaped receptacle for the oil is decorated by a five-headed cobra on the top of the handle.

Directly opposite the handle is the pan for burning the oil, with a small figure of Ganapathy at the back. The jug-like form is somewhat accentuated by the position and shape of the fire-pan which is placed in the same relative position as the mouth of a jug. The form is not uncommon in Nepalese work, and in the lamps brought from Tibet, which are mostly made in Nepal.

It is in the Government Museum.

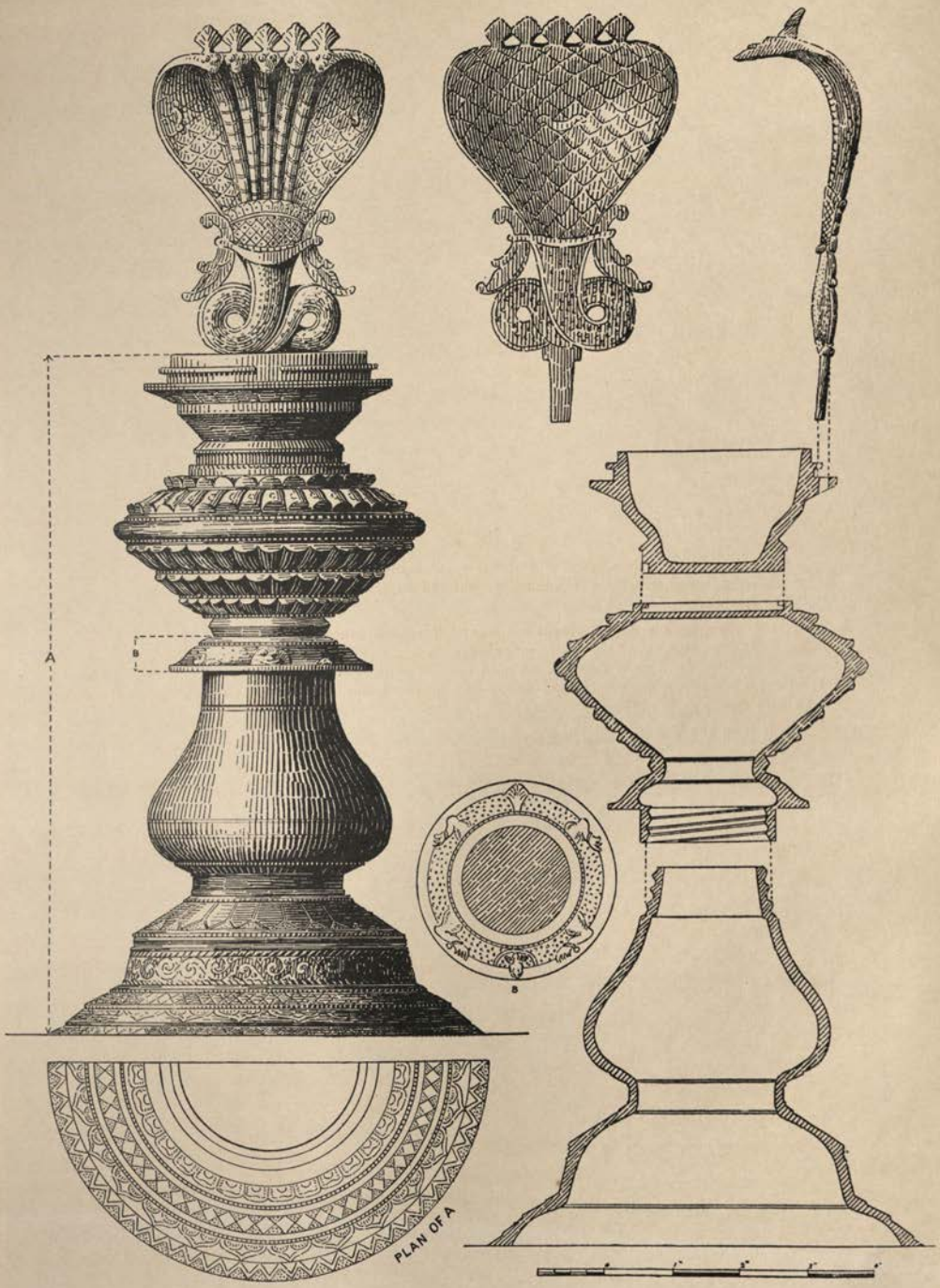


Fig. 111.

Fig. 111.

The article here illustrated is probably a form of lamp used in worship. The lamp pan seems too deep for camphor-burning, but there is no special V-shaped section for the wick as is usual in oil lamps.

The symbolic tortoise about half way up the stand should be noticed.

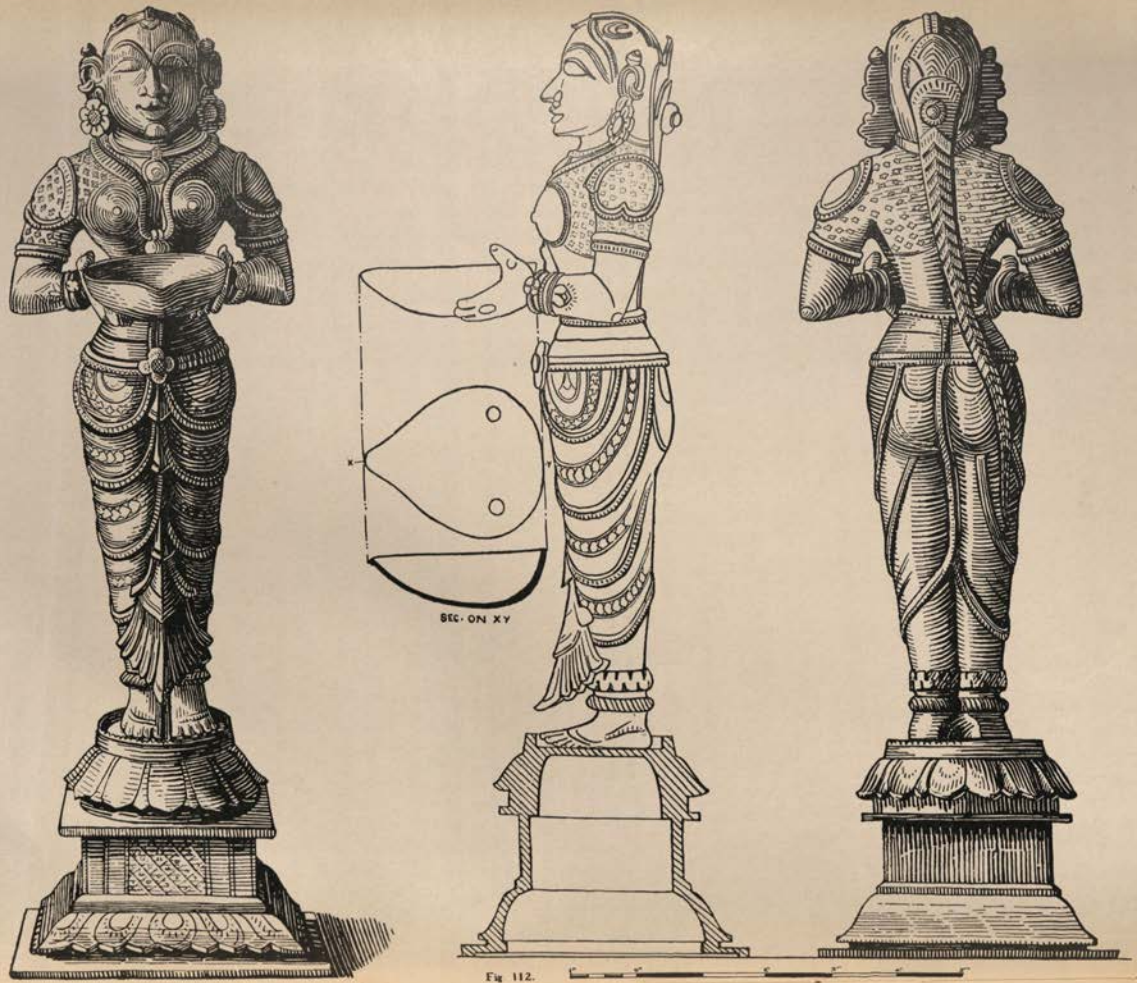


Fig 112.

Fig. 112.

A cast brass figure holding a lamp. This is an excellent example of this form of lamp.

The figure is in every way characteristic of recent Hindu workmanship.

The wide hips, small waist and accentuated breasts any eyes may be said to be more orthodox than beautiful. It has, however, a charm and quaintness all its own, and looked at from the ornamental point of view and as a conventional figure more or less architecturally treated, there is very much in its favour.

These lamps are commonly used in pairs, placed on either side of a god. Sometimes single ones are made and kept lighted as memorials.

These are called by many different names in Tamil, perhaps the most common being "Kamakshi" lamp or "Ammen" lamp.

This and the following example are in the Government Museum.

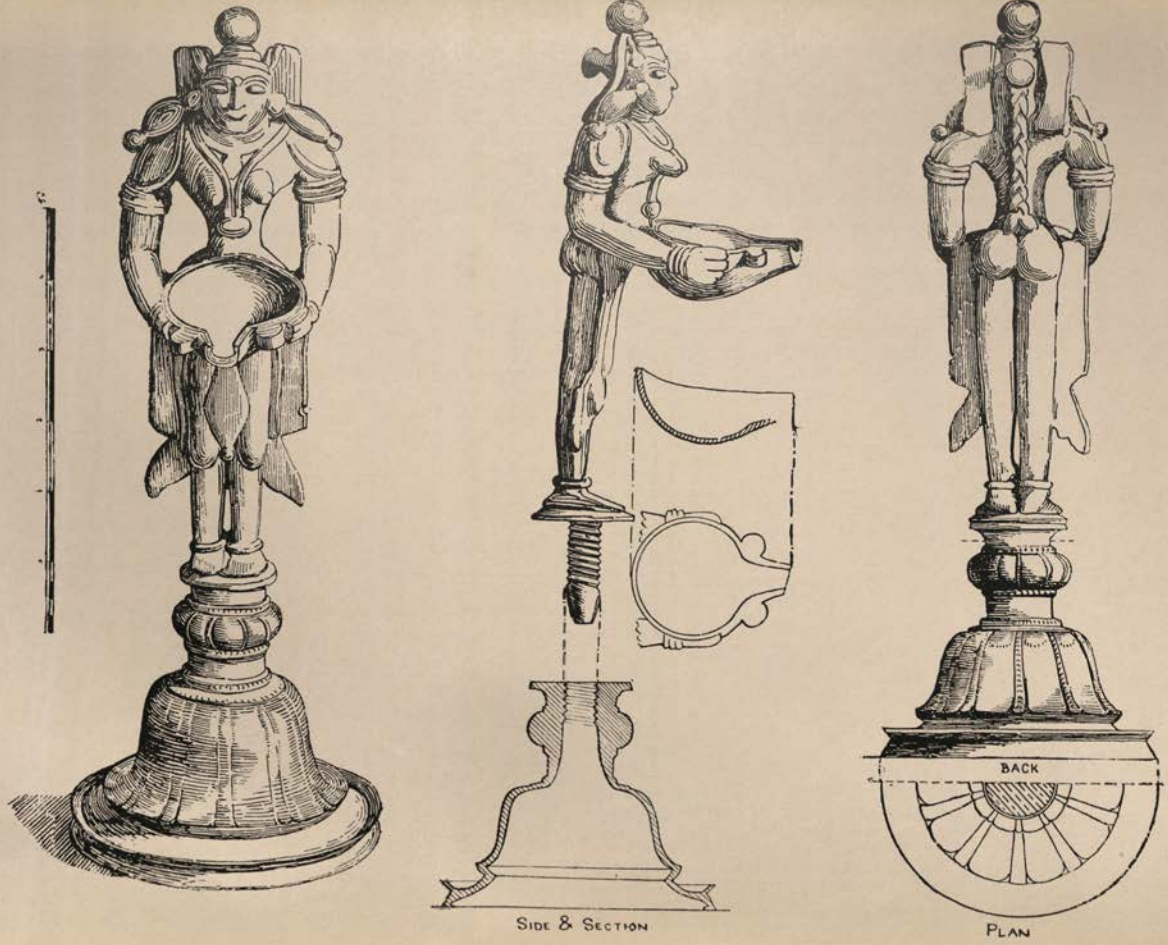


Fig. 113.

Fig. 113.

A cast brass lamp. This is a crude and early form of lamp similar to the previous example, but lacking in most of its points of excellence.

The modelling and finish is of the most artless description, but it is interesting, because of its being, probably, a very early example of this form of lamp.

Fig. 114.

Fig. 114.

The type of lamp represented by this and the following half score of drawings are intended to be placed in wall niches.

Examples as elaborate as the present specimen are more frequently found in temples than in private use.

The ornamentation of this example is typical of the common form, of small size, sold in thousands in every metal bazaar.

Sri or Lakshmi with the elephants on each side, the mounted figures on the base, which probably are intended for Kuvera, the god of riches, and the small subordinate figures holding tiny lamp pans on each side are all of frequent occurrence.

Other details of the ornament, the swans, parrots and chukrams, the naga and the knobs in the form of flower buds, are also usual.

This specimen which is of cast brass is in the Government Museum.

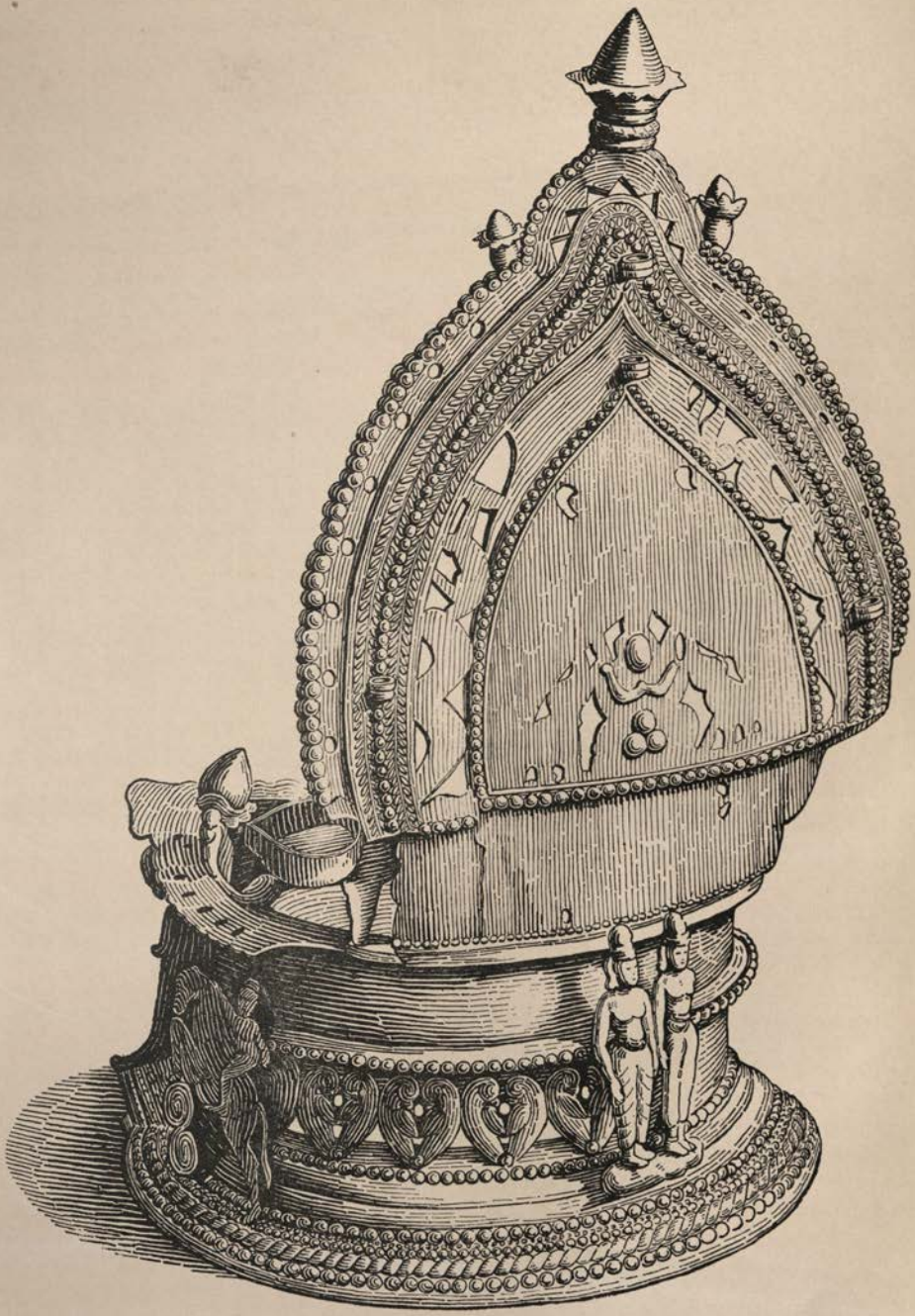


Fig. 114-A.

Fig. 114-A.
The drawing shews the back of the preceding lamp.

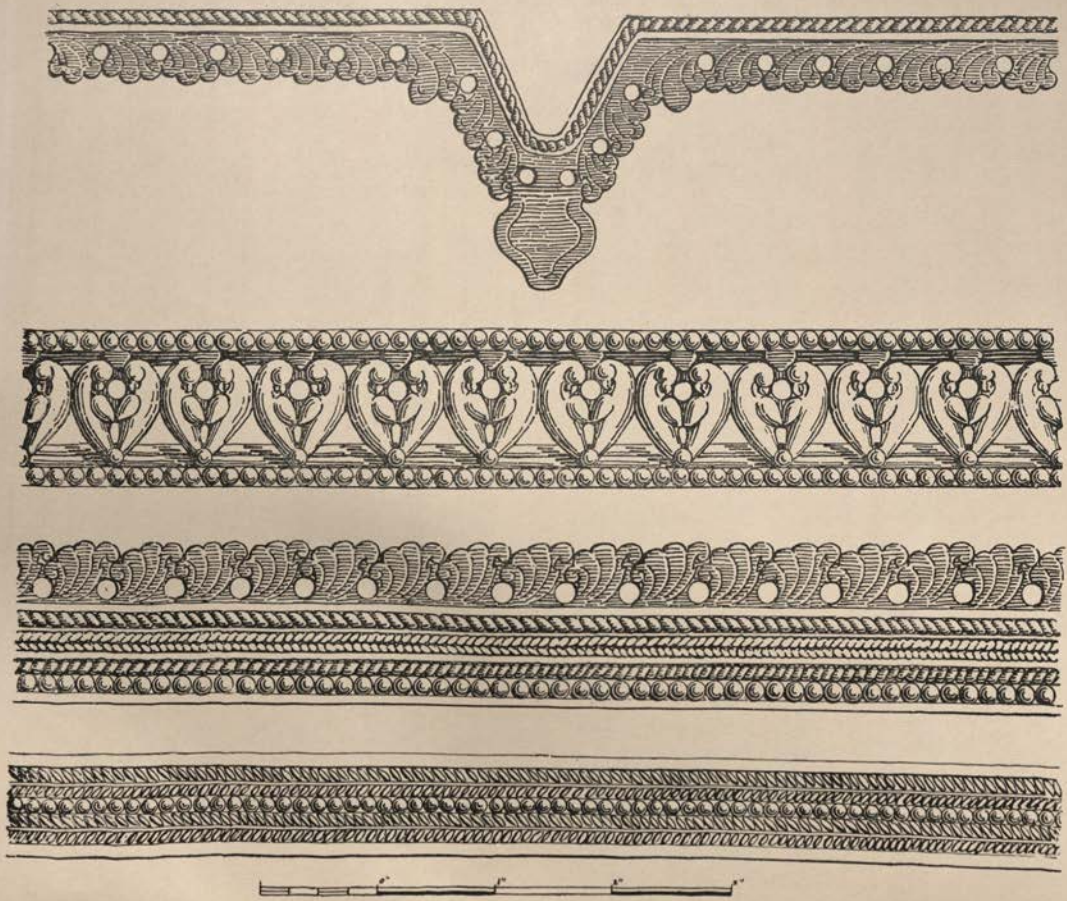


Fig. 114a.

Fig. 114-B.

This shews some of the details of the elaborate ornament of figure 114.

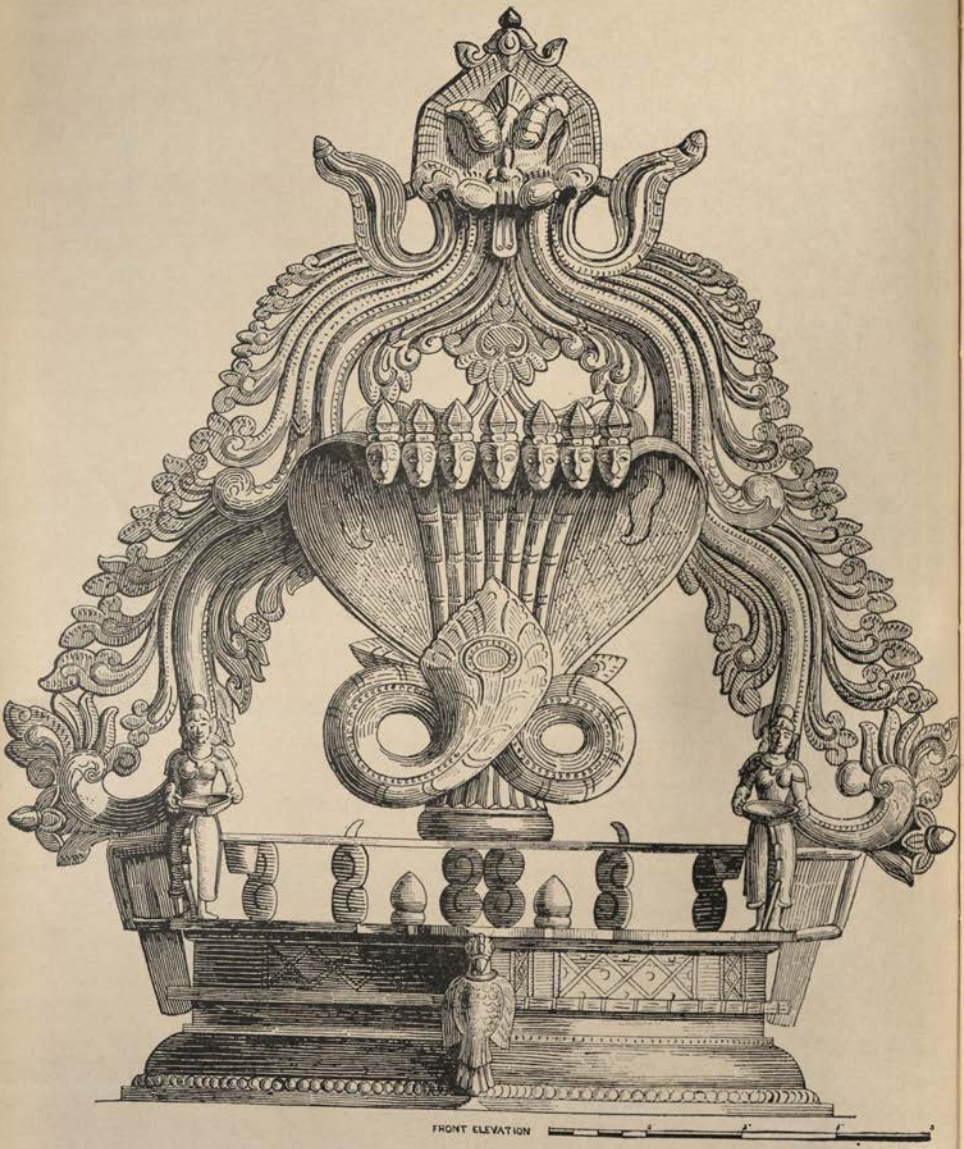


Fig. 115.

Fig. 115.

This elaborate lamp is an unusually good specimen. The back part which resembles the back of a shrine for a deity, and the seven-headed cobra, are both detachable.

It is of cast brass and is in the Government Museum.

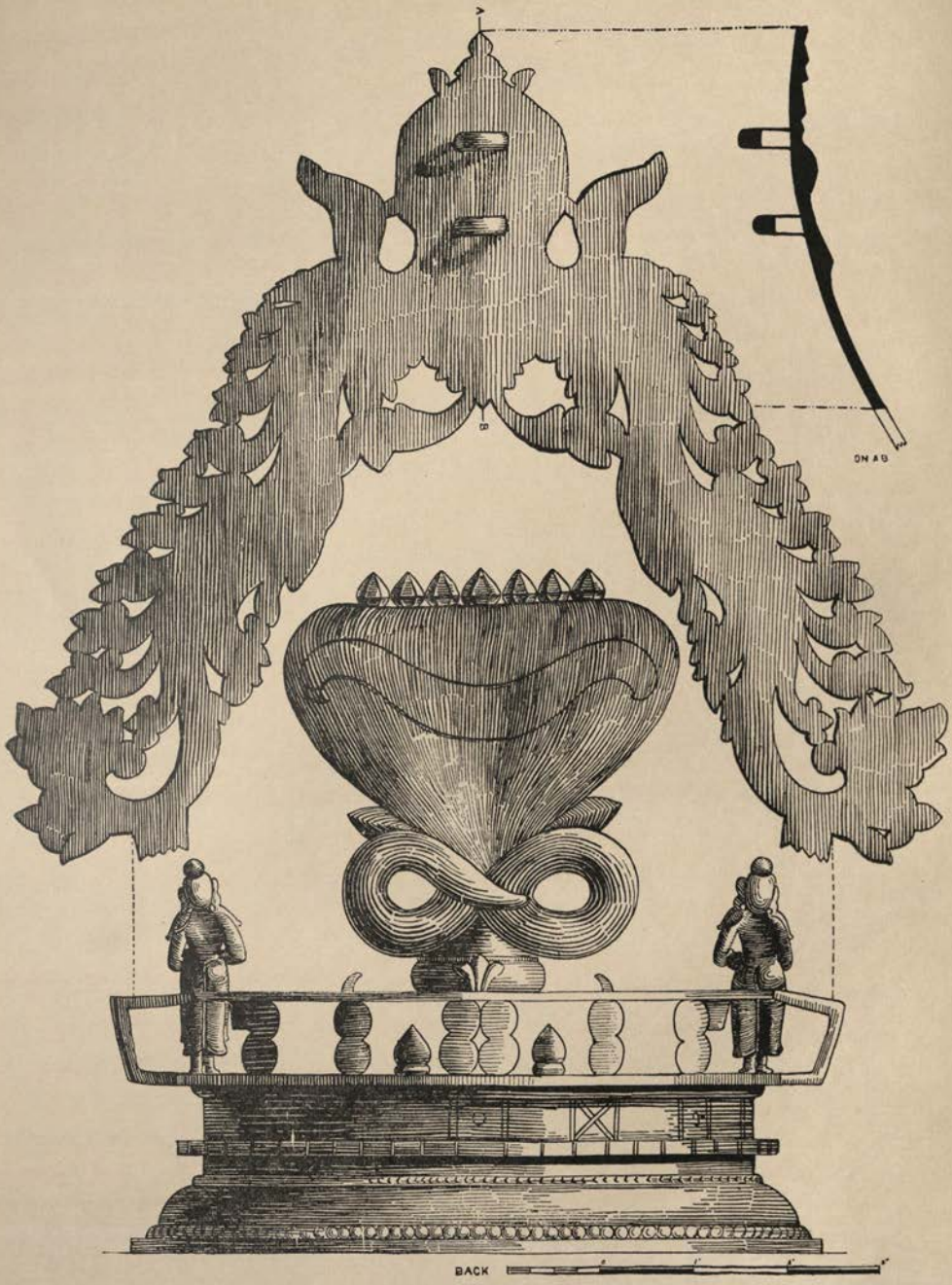
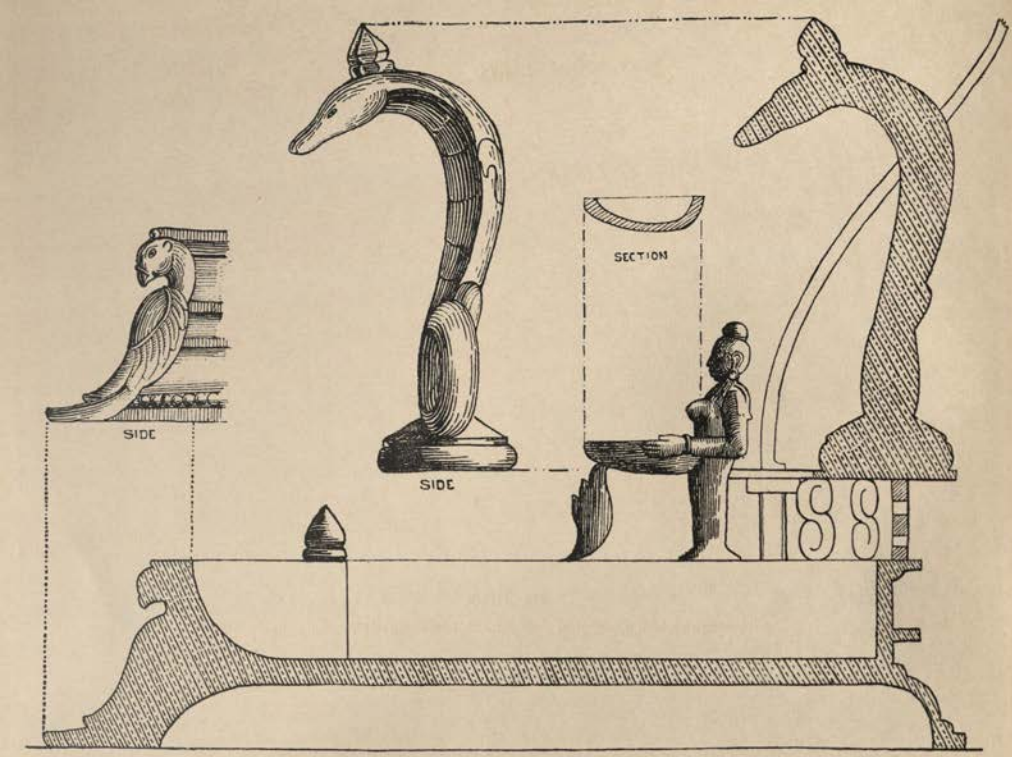


Fig. 115. A.

Fig. 115-A.
This shews the back of the preceding lamp.



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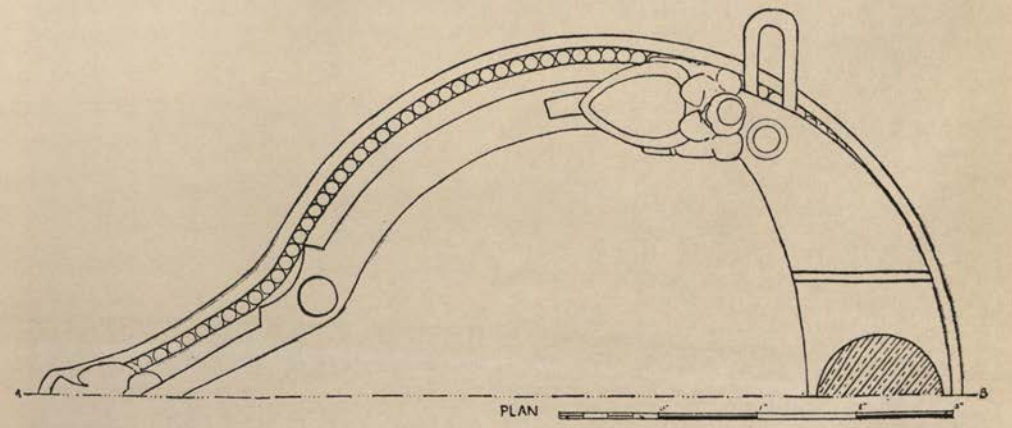


Fig 115-B.

Fig. 115-B.

The drawing shews the half plan, side section, and details of the lamp (figure 115).

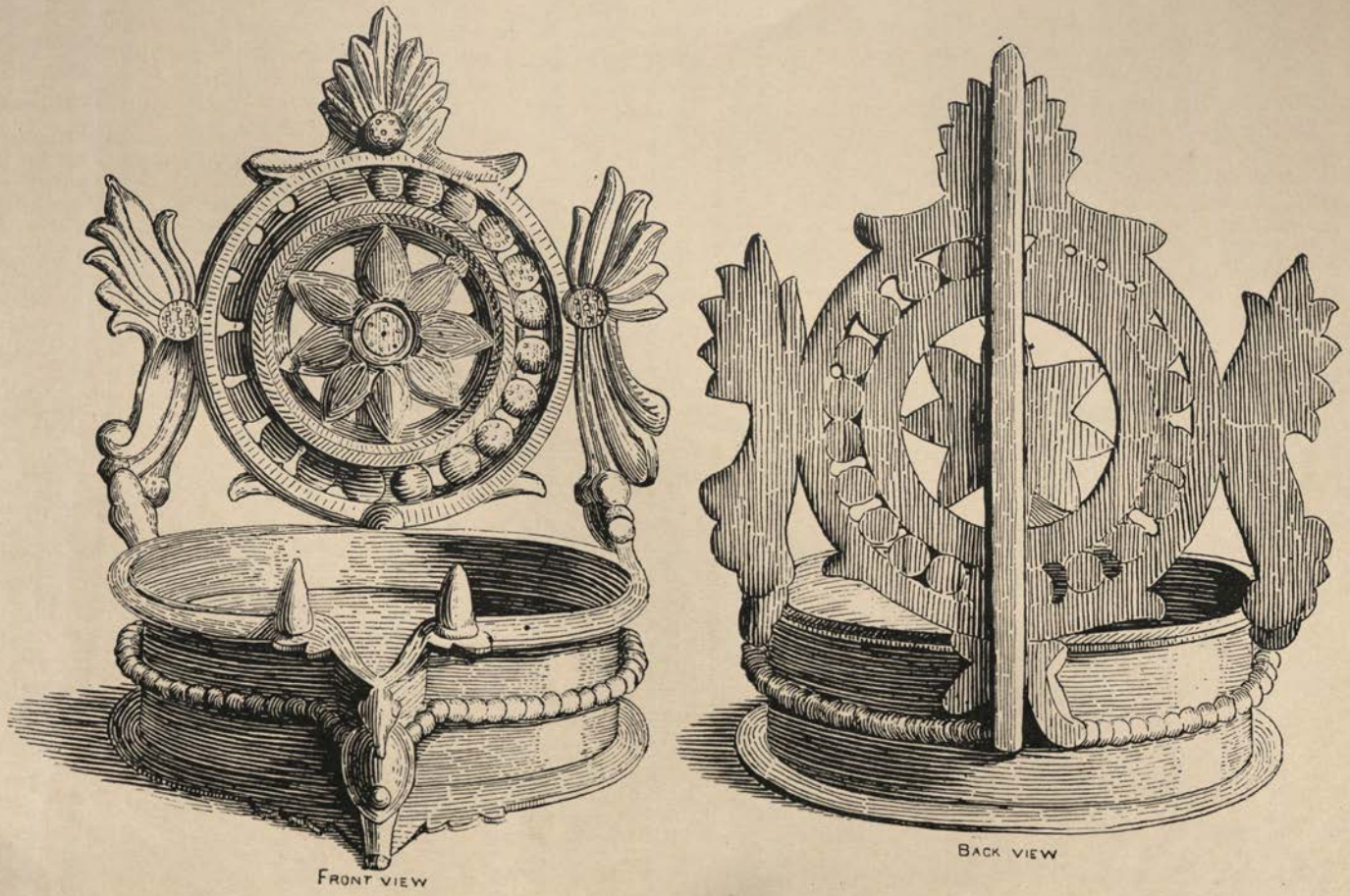


Fig. 116.

Fig. 116.

The two drawings shew the front and back of this lamp which is ornamented with a large chukram.

It is in the Government Museum.

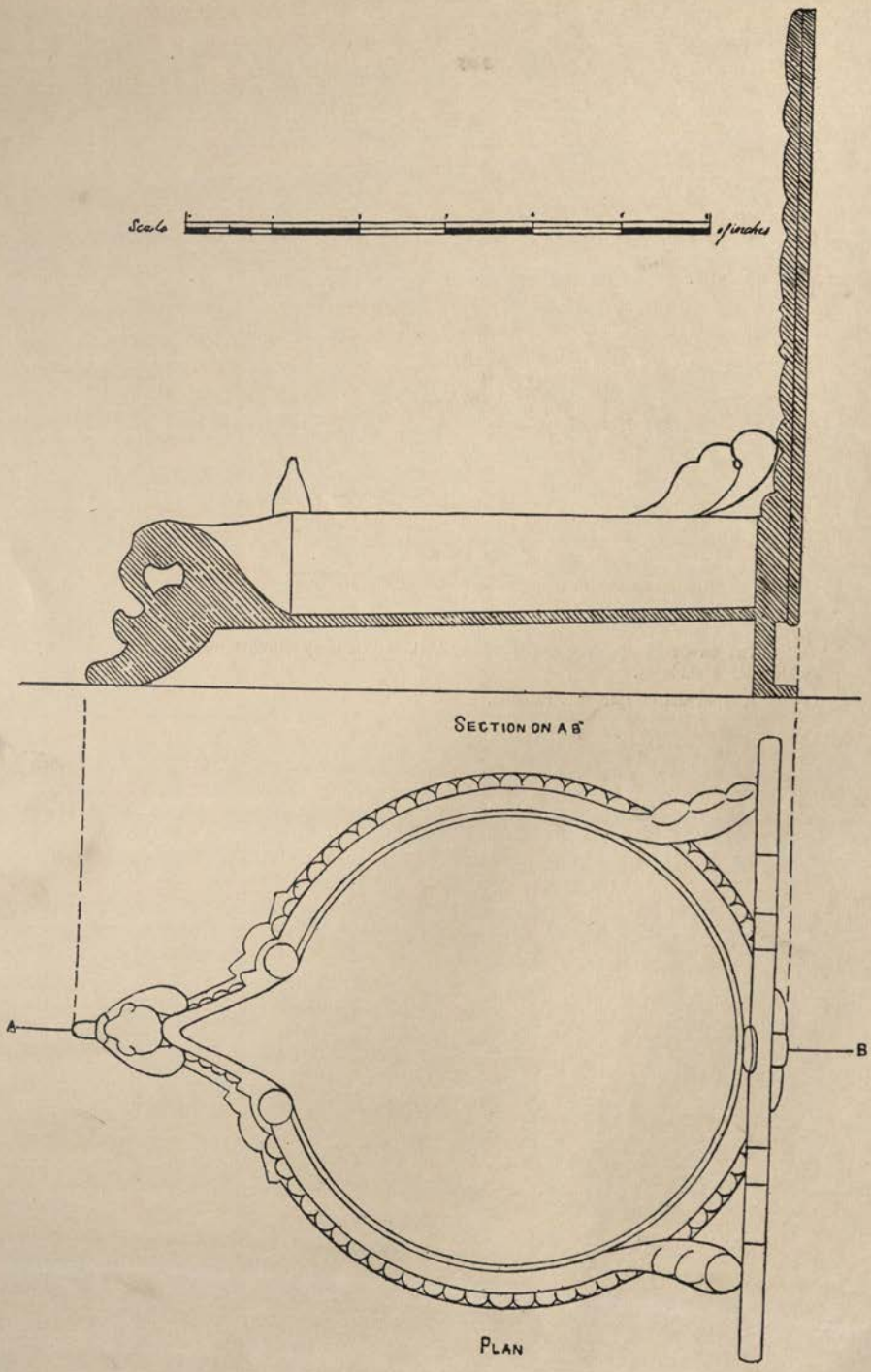


Fig. 116A.

Fig. 116-A.

This shews the side section and plan of the preceding example.

Fig. 117.

Fig. 117.

This is a boldly ornamented example of the type of lamp of figure 114.

The workmanship is somewhat crude, but the ornament is well designed and well placed.

Fig. 117-A.

Fig. 117-A.
This shews the back of the previous figure.

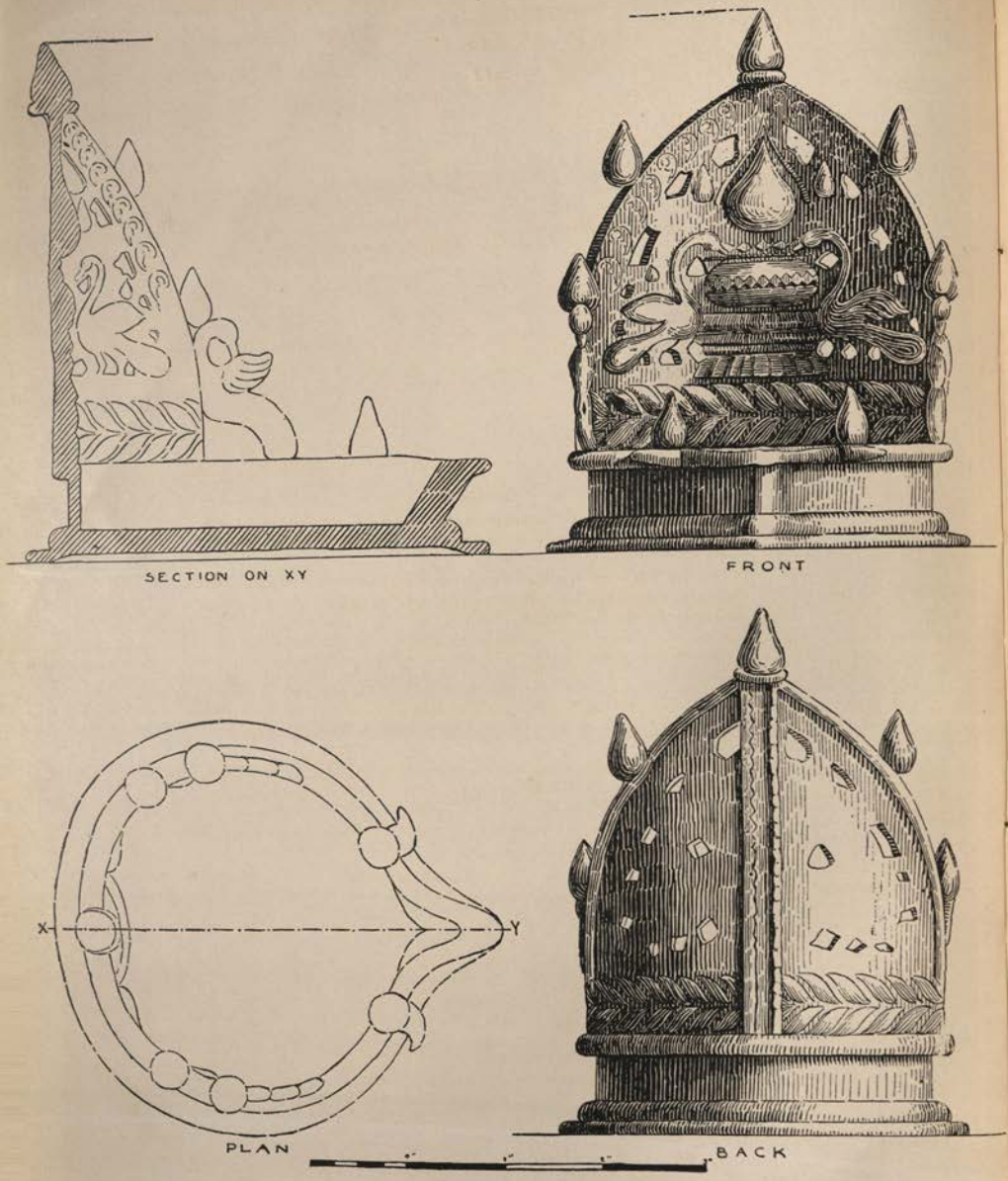


Fig. 118.

Fig. 118.

The specimens of this type judging from the modelling and condition of the metal (by no means very safe guides to follow) are probably much earlier examples than the more elaborate ones such as figures 114 and 117.

In this, the two swans drinking from a vessel, is shewn a motif of very great age.

The knobs surrounding the back at intervals and on either side of the wick catch and reflect the light very happily.

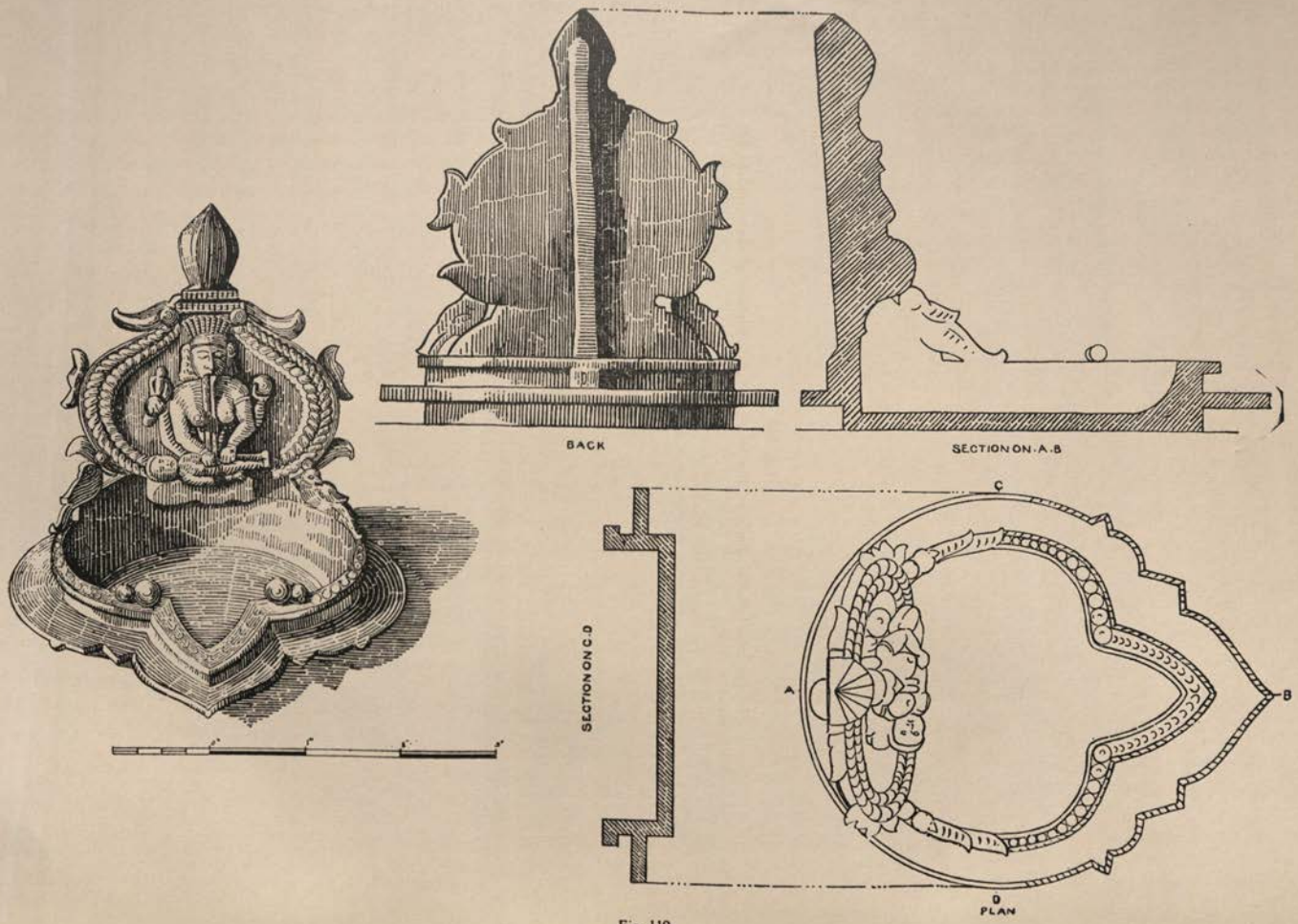


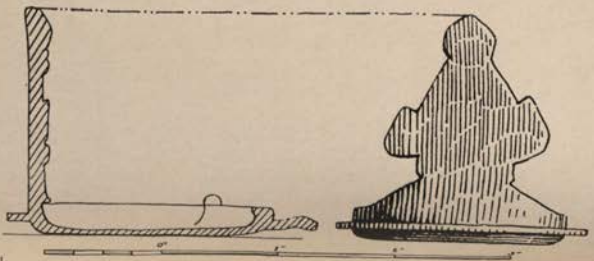
Fig. 119.

Fig. 119.

On the back of this specimen the fourth Vishnu avatar, of the man-lion, or Narasimha, is shewn.

It is in the Government Museum.

BACK-VIEW



Figs. 120 & 121.

Figs. 120 & 121.

The larger drawing shews what might well be a transitional stage of design in this form of lamp, from the early examples figures 118 and 123 to that of the type in figure 114.

In the example now under consideration, the Lakshmi with the elephants, and the two swans, are both used as motives.

The smaller drawing is that of a tiny lamp with a nama on the back.

Both are owned privately.

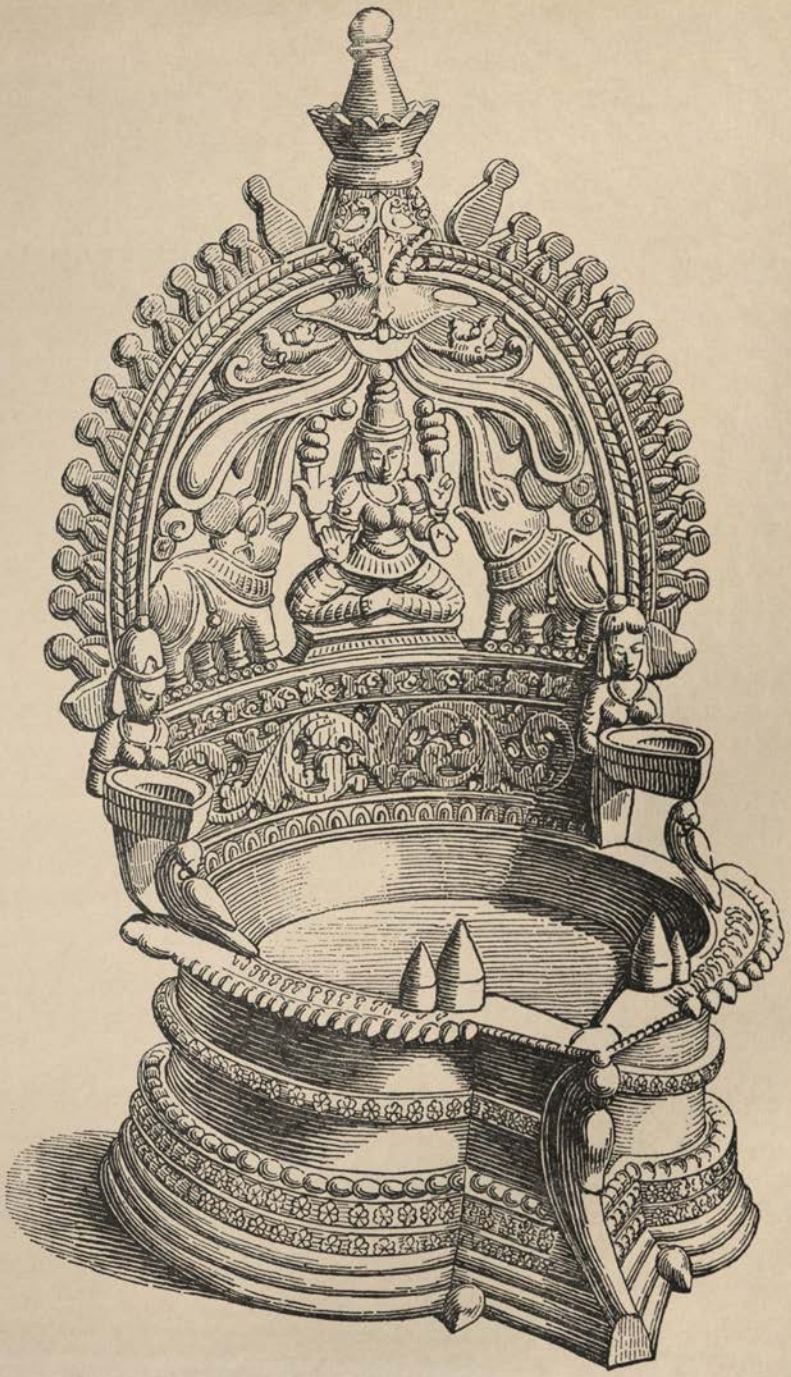


Fig. 122.

Fig. 122.

This lamp is in nearly all respects similar to figure 114, except that the mounted figures at the sides are omitted.

It is in the Government Museum.

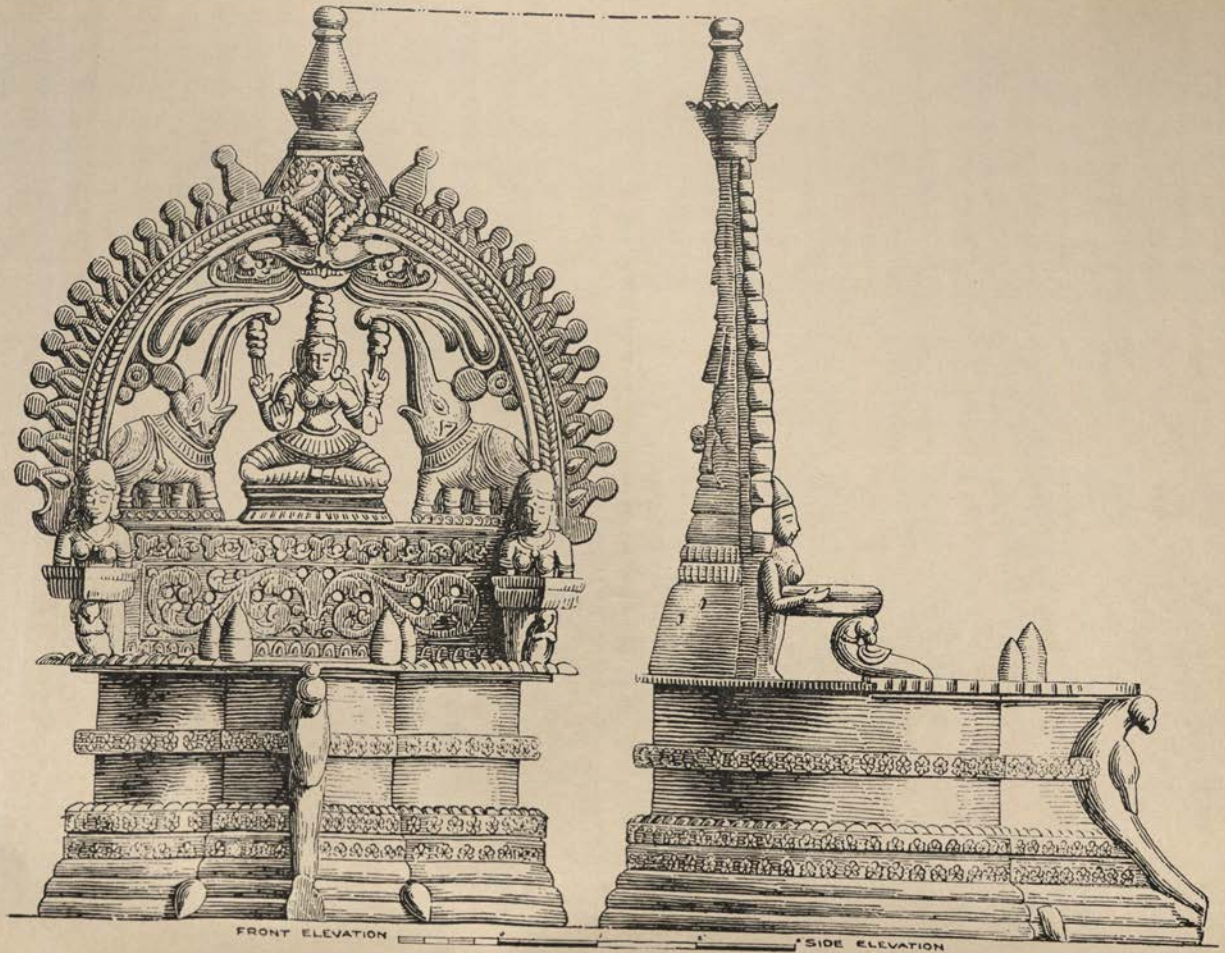
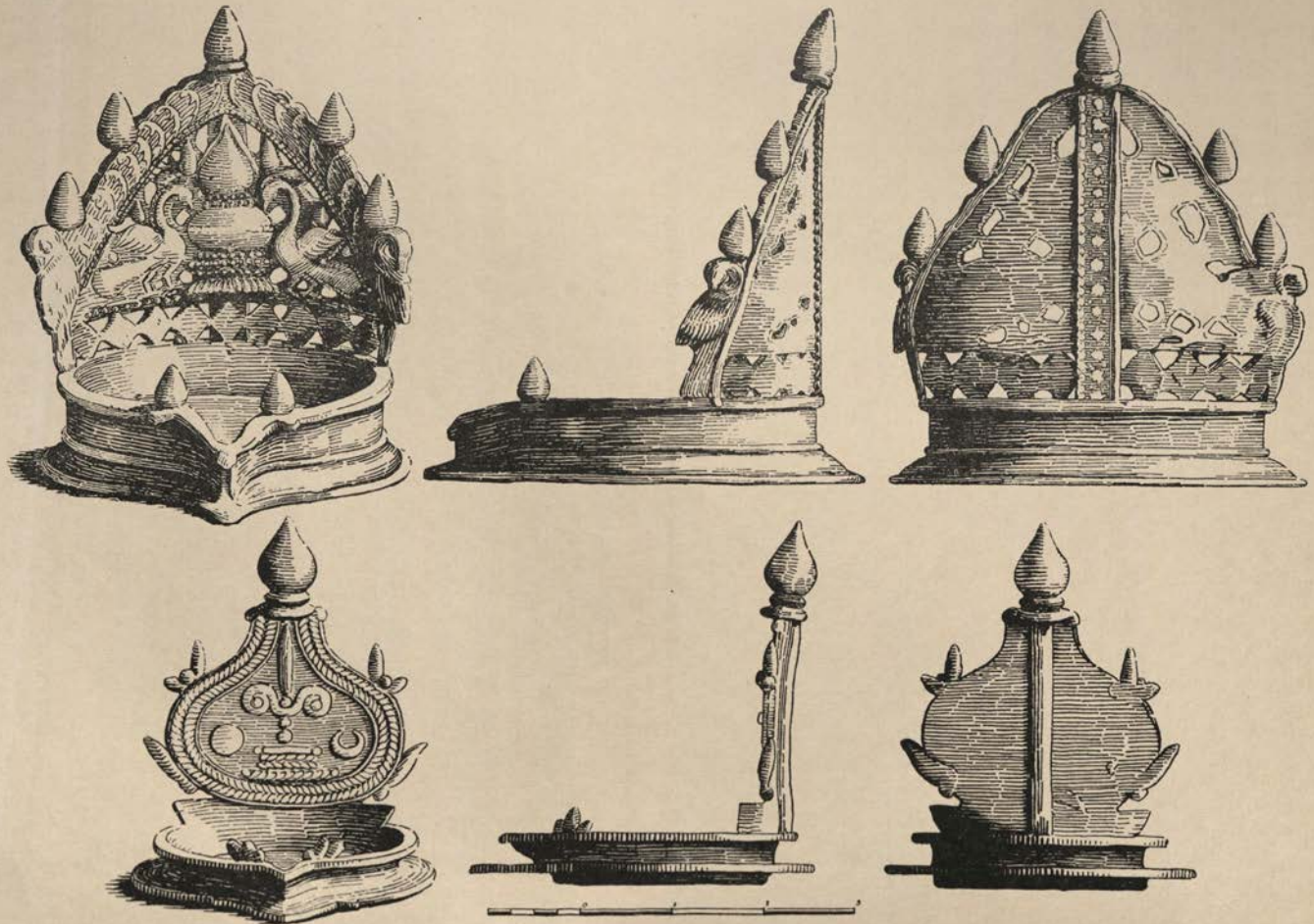


Fig. 122-A.

Fig. 122-A.

These shew the front and side elevations of the preceding lamp.



Figs. 123 & 124.

Figs. 123 & 124.

Of the two lamps here shewn, the upper one is very similar to figure 118, while the lower one is a typically decorated example of a smaller pattern, the nama, sun a crescent moon being the ornamental units used.

Both are owned privately.

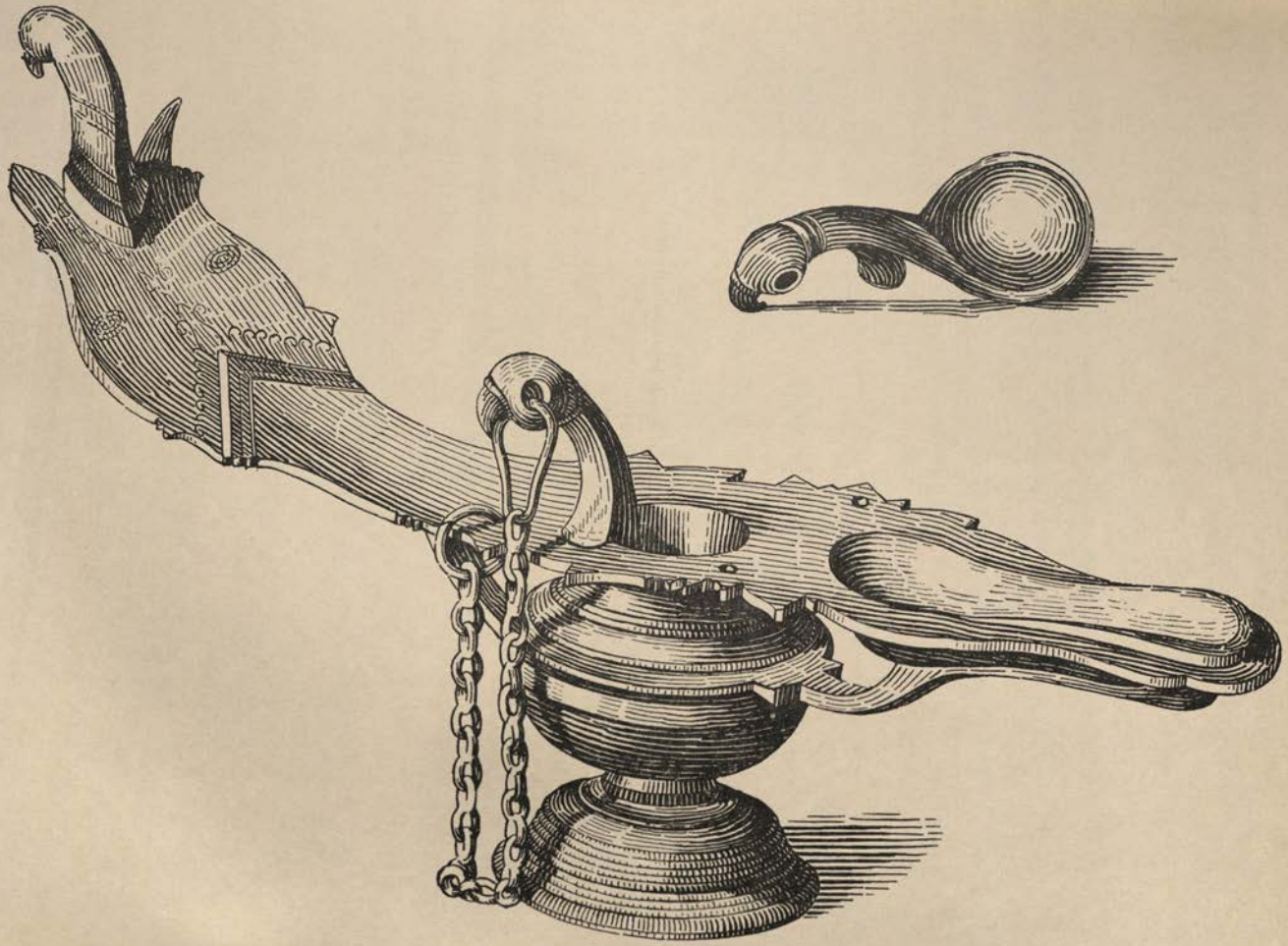


Fig. 125.

Fig. 125.

A brass lamp for carrying, with a reservoir for oil, and a ladle attached.

This beautiful form of lamp is commonly used in temples, and sometimes of small dimensions in private houses.

It is distinctly different from any other South Indian form, though the same principle of a reservoir, from which the oil may be fed to the wick pan is seen in the Nepalese lamp (figure 110).

This specimen is in the Government Museum.

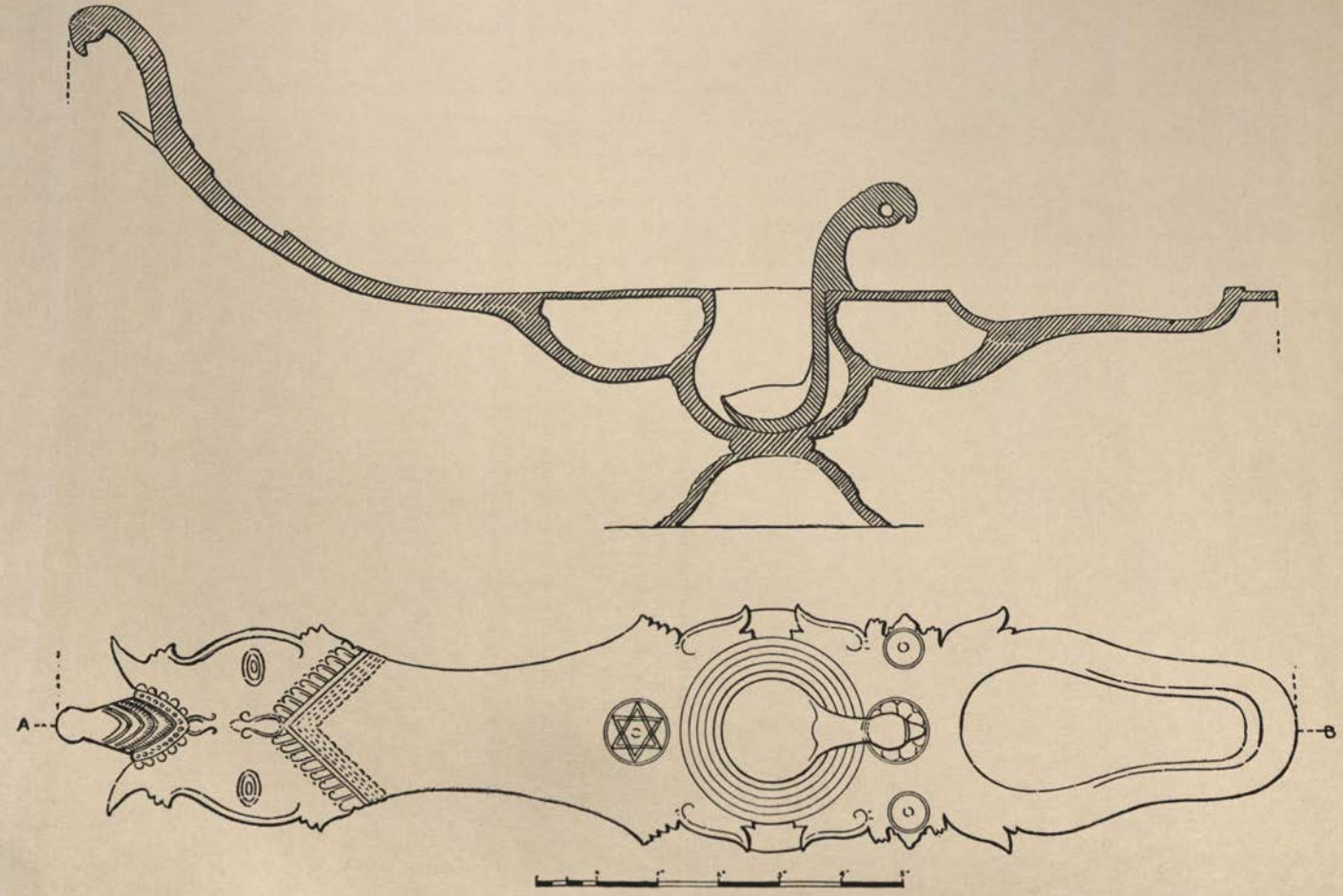


Fig 125·A.

Fig. 125-A.

The drawings shew the plan and section of the preceding lamp.

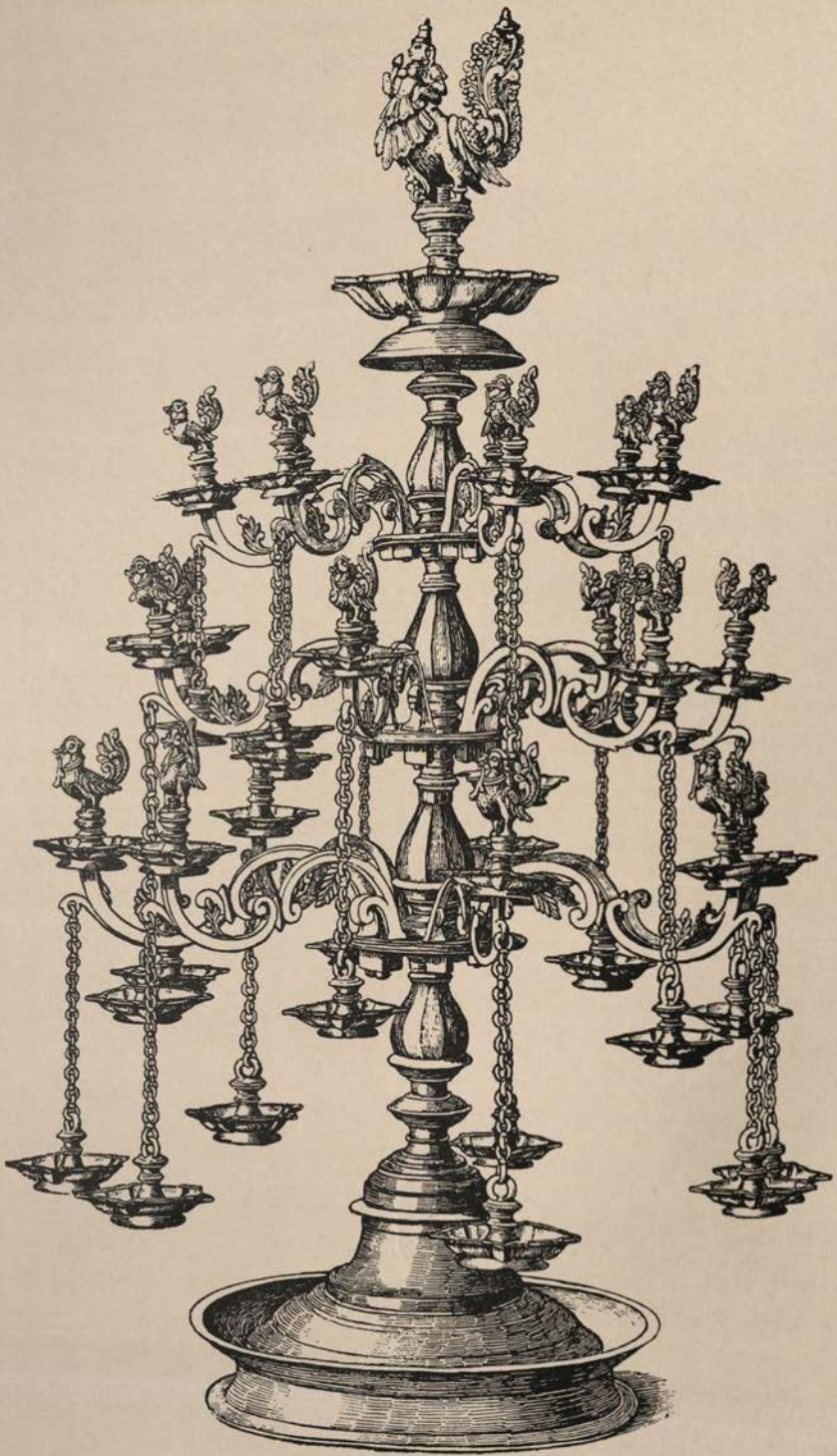


Fig. 126.

Fig. 126.

This large standing lamp is a very fine example of cast brass work.

It is just over five feet in height and nearly three feet in extreme width. It is in the Government Museum.

From the massive base rises a well proportioned shaft, divided into four sections. From each of the intersections, spring seven graceful scrolls each supporting a lamp for five wicks, and from these again depend a hanging lamp, also for five wicks.

The three tiers of scrolls, each tier holding lamp pans for 70 wicks, and the larger pan above for seven wicks make a total of 217 separate lights.

The top is surmounted by a figure of Lakshmi with the body of a swan, a usual termination for this form of lamp.

Each of the lamps upheld by the scrolls also terminates in a swan.

Such elaborate examples as this lamp are used only on very festive occasions such as marriage ceremonies.

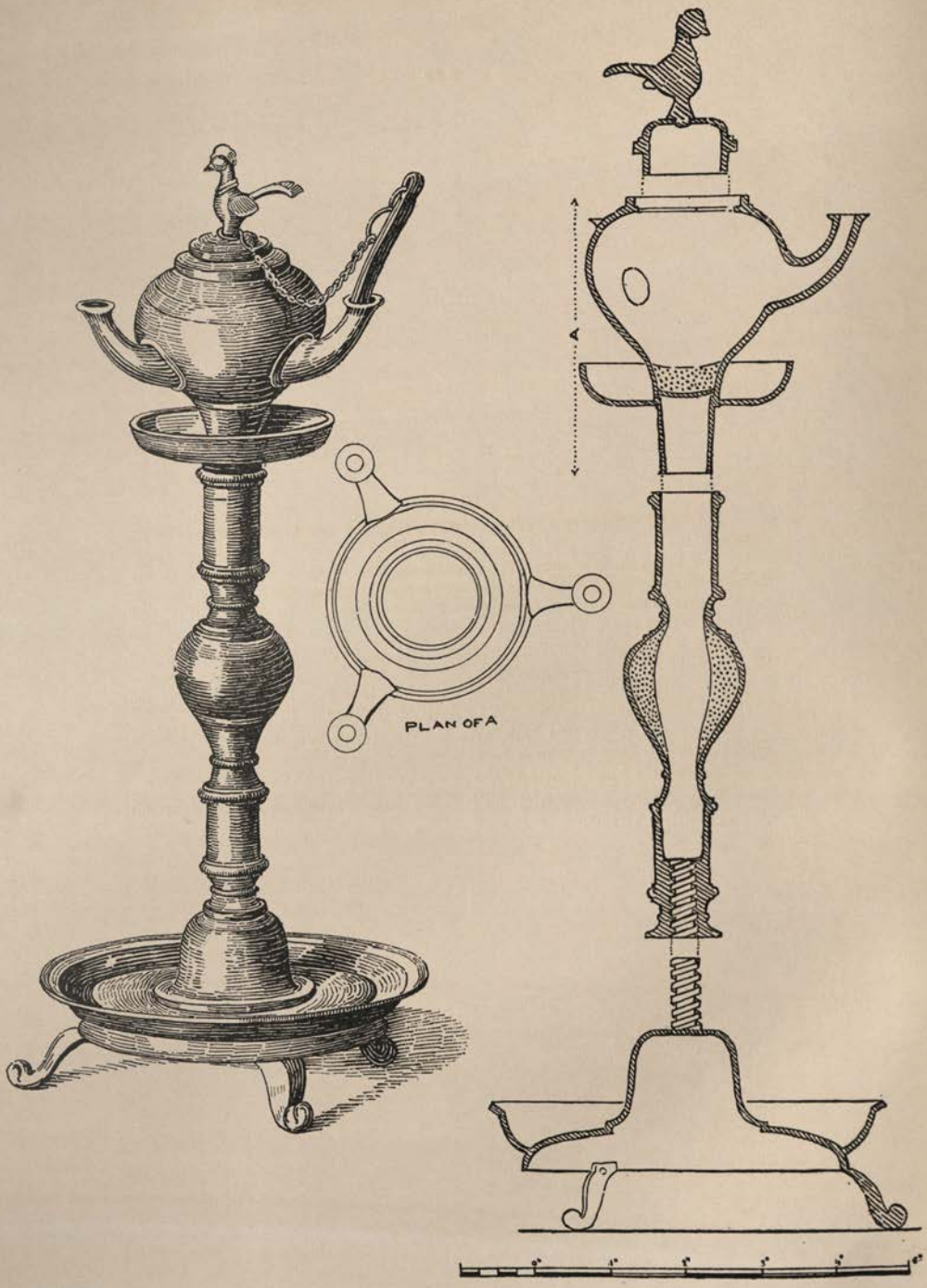


Fig. 127.

Fig. 127.

This small lamp with a covered receptacle for the oil is probably a Malabar pattern.

The oil container with the three tubes for wicks is very similar to the Italian lamp so frequently copied in various parts of the West Coast.

The specimen is in the Government Museum.

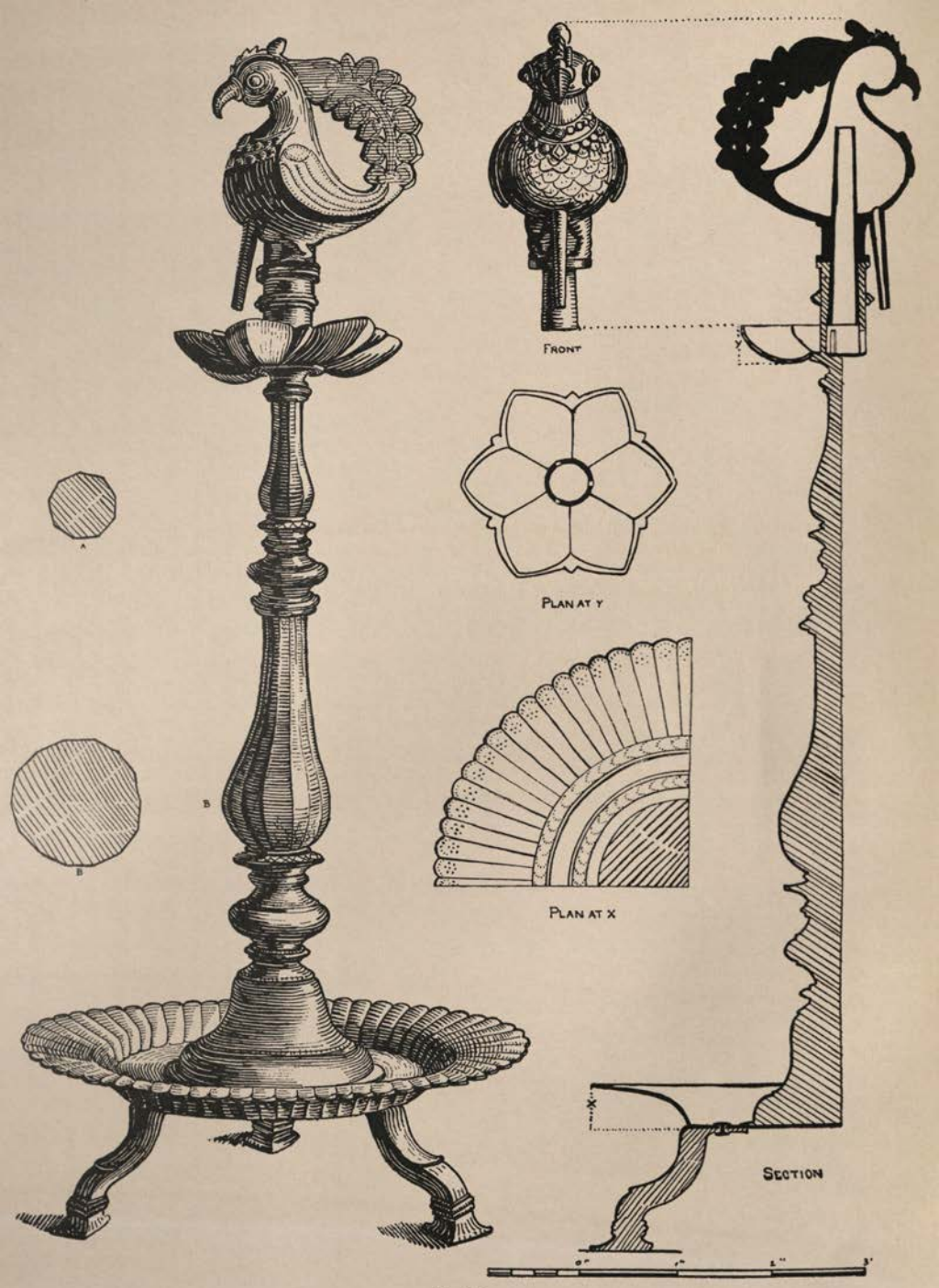


Fig. 128.

Fig. 128.

This brass lamp utilizes the bird form at the top as a reservoir for the oil. The sectional drawing shews the internal construction of tubes whereby the oil is fed into the pan.

The specimen is in the Government Museum.

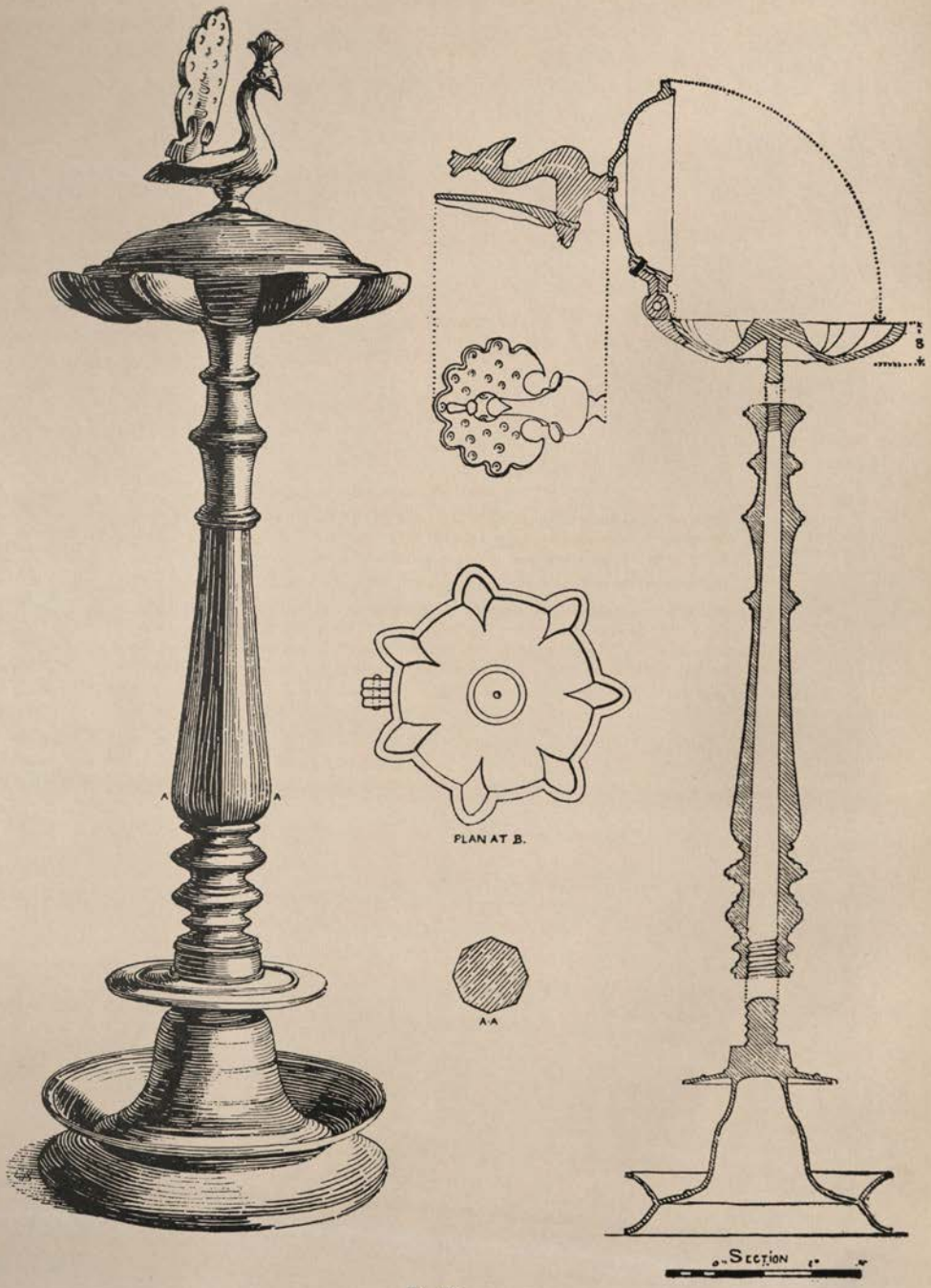


Fig. 129.

Fig. 129.

This is a usual form of standing lamp, except that the oil pan is covered. The cover is surmounted by a peacock and the pan has places for seven lights. It is made of bell-metal and is in the Government Museum.

The bird at the top of these lamps is more often a swan than a peacock.

While in this example the features of the peacock are well marked, in some, it is difficult to determine whether a swan or a peacock is intended, except by reference to the tail. If the plane of the tail is at right angles to the body of the bird, one may safely infer that a peacock is intended, if in the same plane, a swan.

Fig. 130.

Fig. 130.

This standing lamp with a swan at the top is a very characteristic example.

The breaking up of the main shaft into various bulbs and mouldings, the different parts of which screw into one another, give the designer considerable scope as to variety of pattern.

Many of these shaft patterns are uninteresting because there is too much monotony in the size of the various parts, no one section being dominant in size or importance.

This criticism is somewhat applicable in this instance, the reverse being the case with figure 134.

Fig. 131.

Fig. 131.

An elaborate standing lamp for five lights made of German silver, or some similar alloy, from the Government Museum.

The care taken with the workmanship and the unusual metal employed, probably point to its having been a part of a wedding dowry.

The base, which usually rests upon the ground, is in this case supported by three legs in the form of scrolls and parrots, and these are too large and high for the rest of the lamp.

Underneath the light pan also, are four small parrots and the top is surmounted by the usual swan.

The frequent occurrence of three legs to support any object in place of the usual four of western countries is attributable to the unevenness of floors on which an object is to rest, three legs being sure of finding support, while a fourth may not, if the floor be uneven.

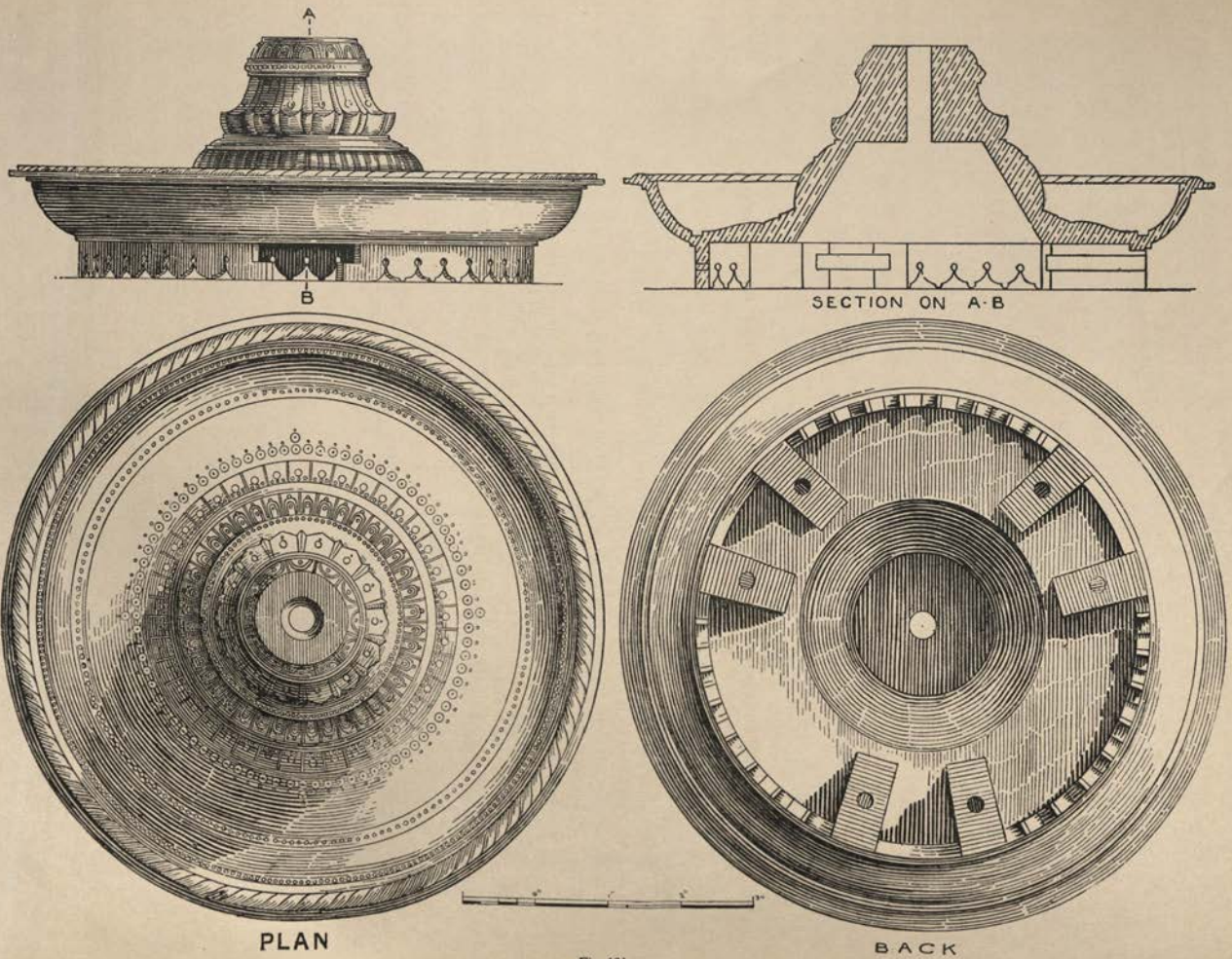


Fig. 131-A.

Fig. 131-A.

The attachment for the legs and the plan and section, both top and bottom, of the base, are shewn here, of the lamp (figure 131).

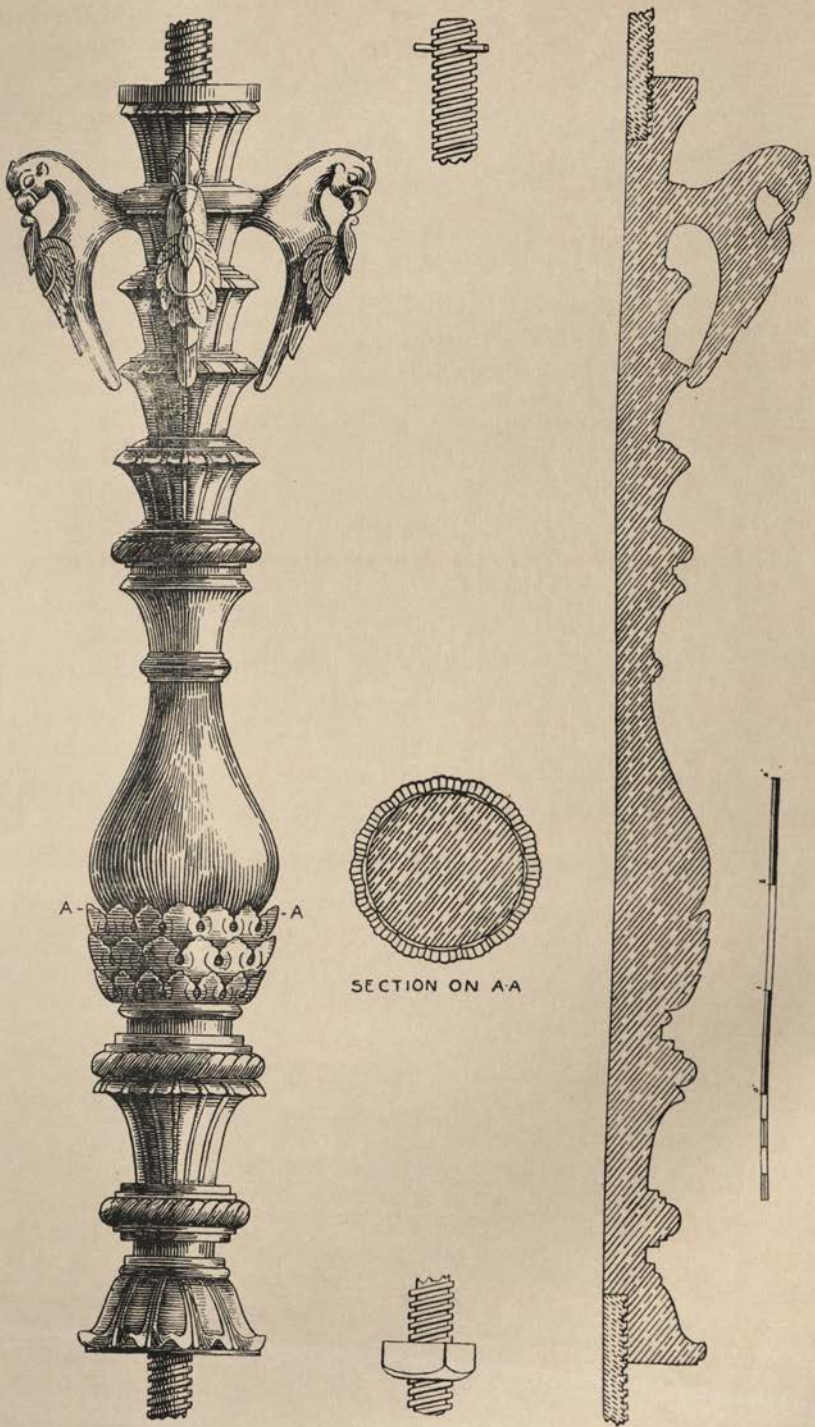


Fig. 131-B.

Fig. 131-B.

This drawing shews the elevation and sections of the shaft of the lamp (figure 131).

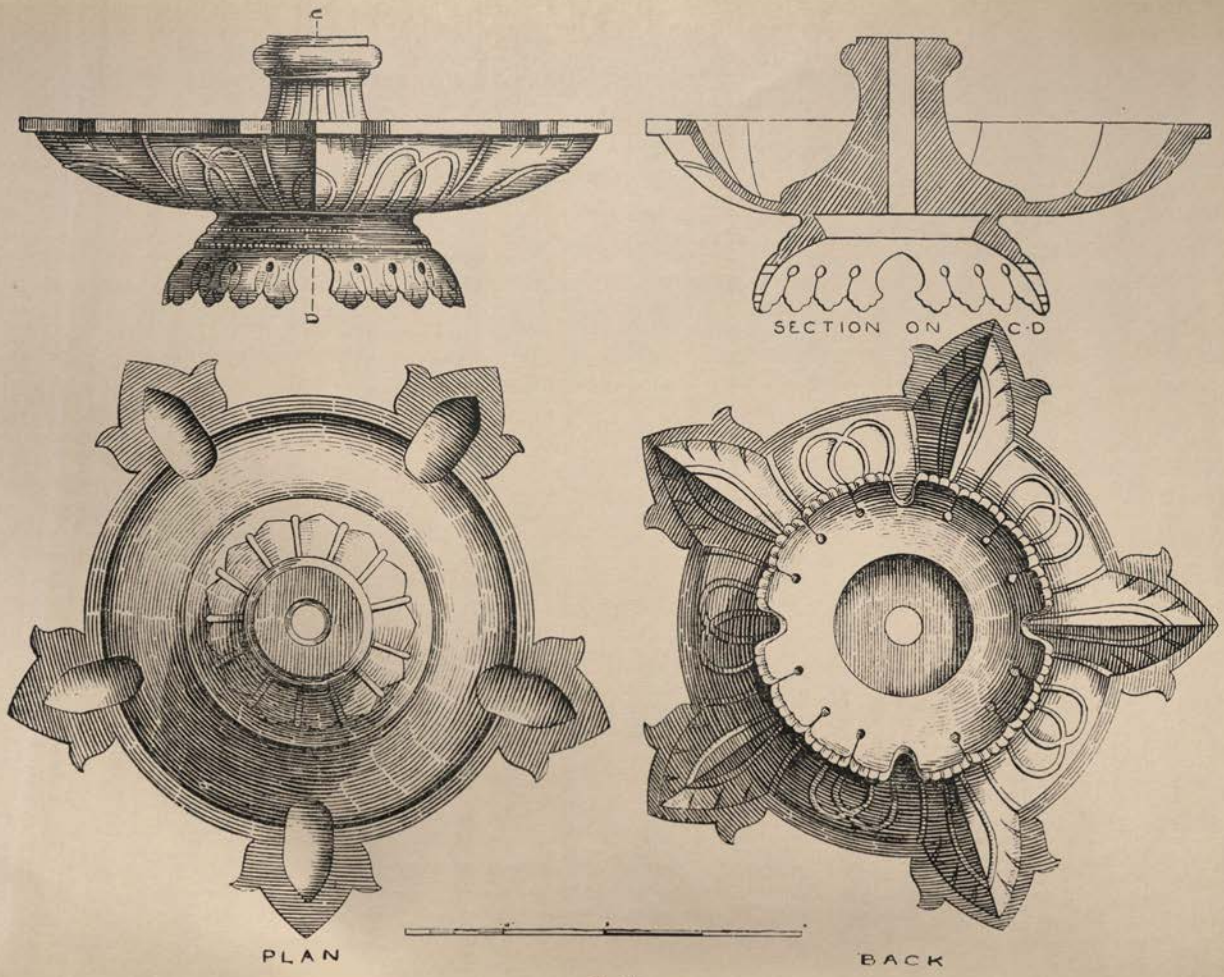


Fig. 131-c.

Fig. 131-C.

The drawing shews the top and bottom side and section of the oil pan of the lamp (figure 131).

Fig. 131-D.

Fig. 131-D.

In this drawing the details of the swan at the top and parrot and scroll at the base of the lamp (figure 131) are shewn.

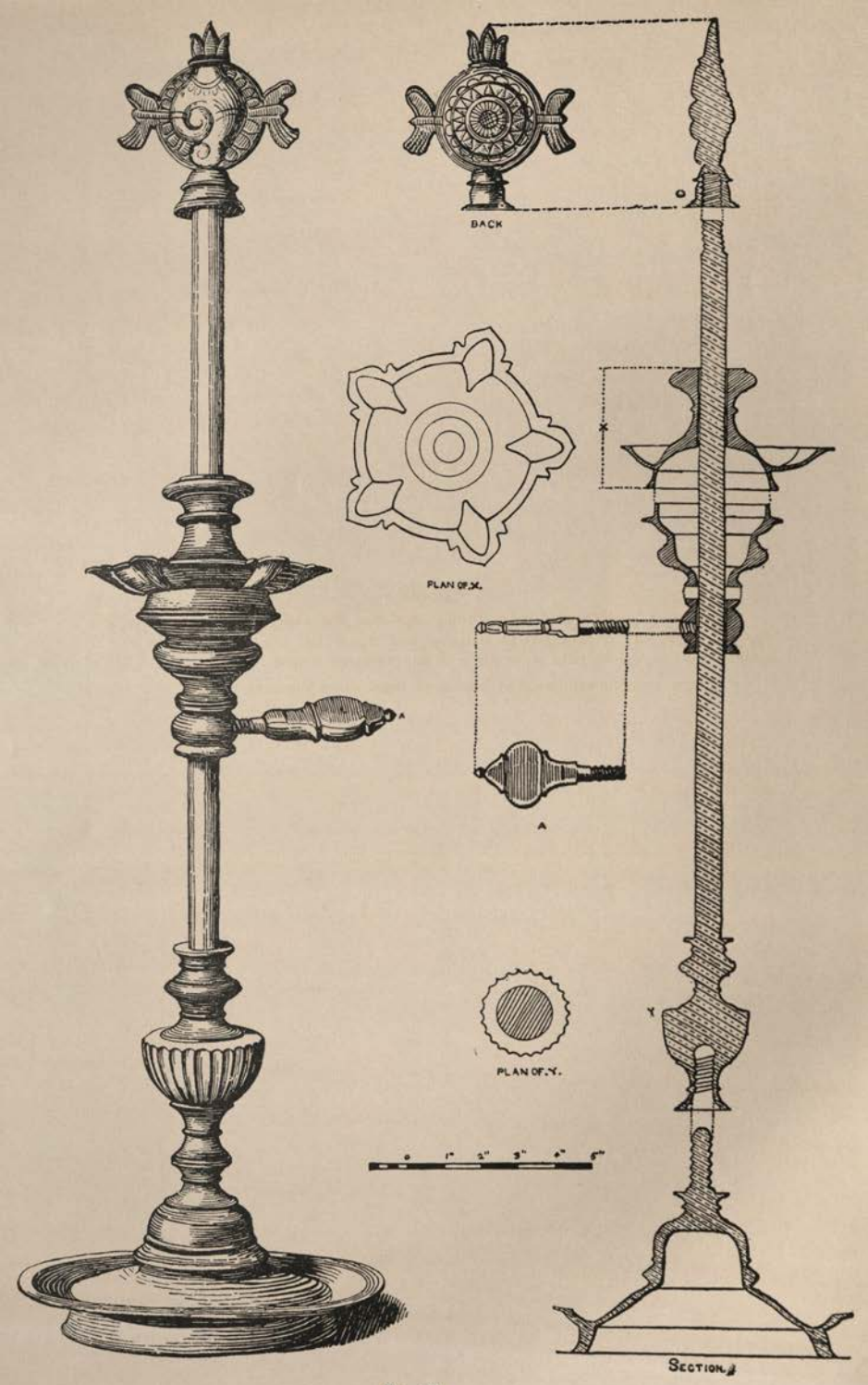


Fig. 132.

Fig. 132.

This lamp is decorated with Vishnu emblems, the conch and chukram, at the top. The light pan is arranged to slide up and down on the standing rod and is fastened by a screw to hold it in place at any required height.

This is a modern innovation borrowed from some Western model.

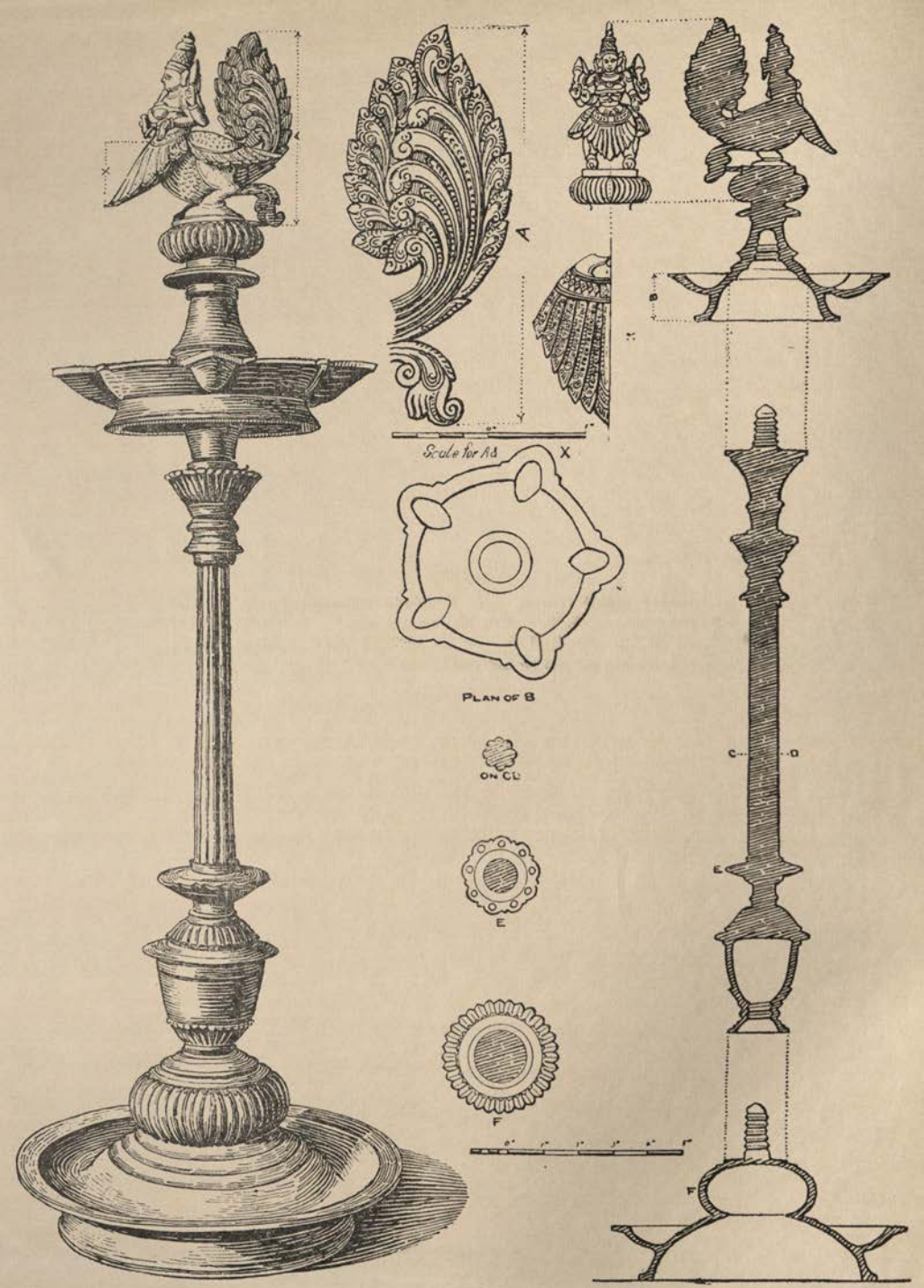


Fig 133.

Fig. 133.

This drawing shews a brass lamp from the Government Museum with a "Lakshmi Bird" at the top in place of the more usual swan.

The straight shaft is fluted. The proportions are not very happy, the top part being too heavy for the rather thin shaft.

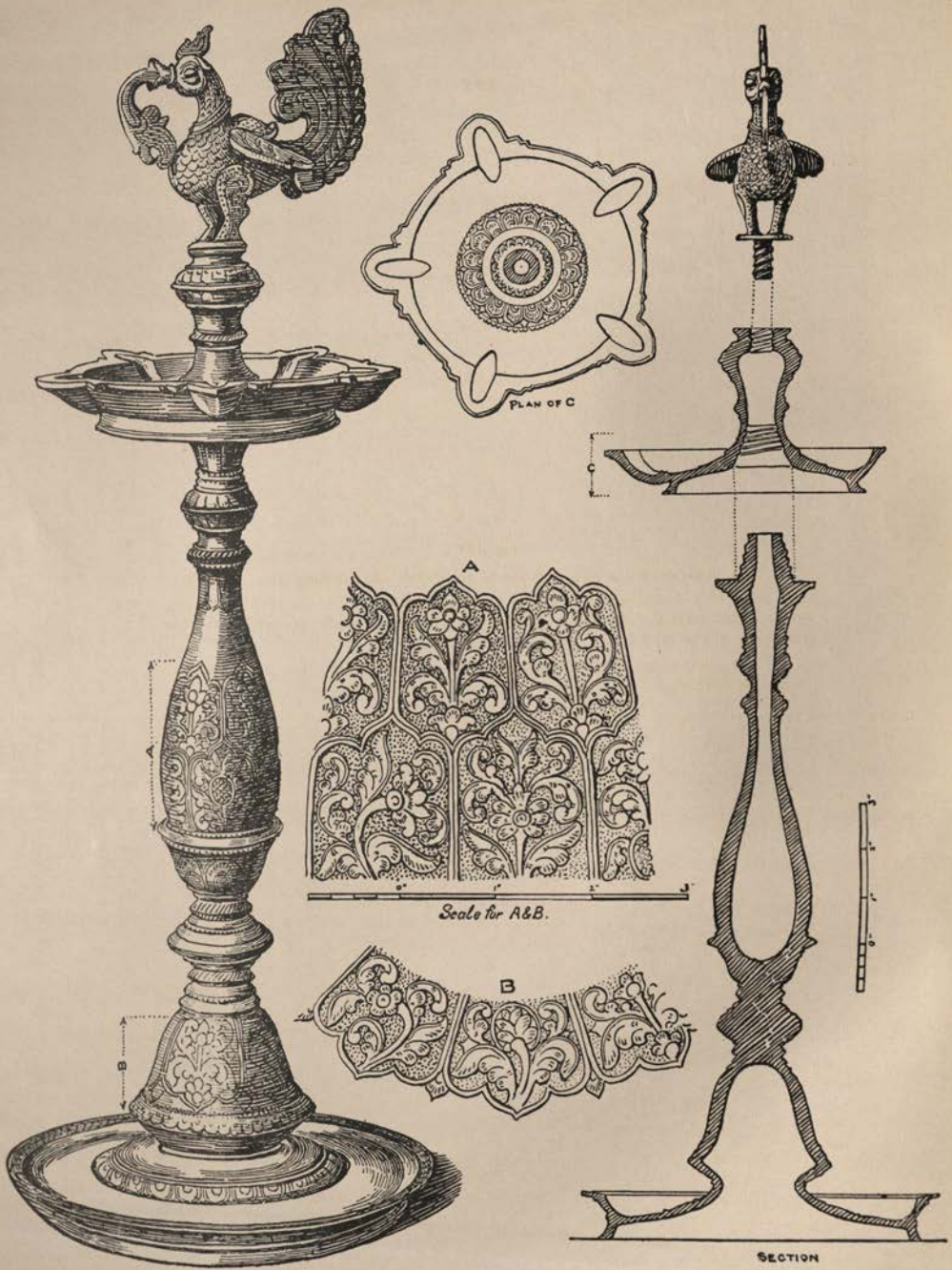


Fig. 134.

Fig. 134.

This brass lamp is a fine example of an ornamented standing lamp.

The only detail, which might be criticised adversely, is the bird at the top, which is not carefully modelled enough nor in good enough proportion for the remainder of the lamp.

The suitable and delicate patterns of incised lines around the stem and base should be noticed.

Fig. 135.

Fig. 135.

This is the most ornate and carefully worked specimen of all the lamps illustrated.

It can only be likened to a piece of goldsmith's work. It is of brass, and is in the Government Museum.

The base pan is supported on three legs formed of parrots and scrolls. From this pan, two branches spring, on each of which rests a small figure bearing a lamp pan for a single light.

A winged lion somewhat raised from the base pan, supports the shaft and this in turn supports the oil pan and the ornament above.

Below the oil pan are four brackets formed of a lion and scroll and above it is a swan on whose back a small figure of Lakshmi rests.

As this example is a very important one in many respects, both because of its elaboration and of its general ornate South Indian Character, it may be well to analyse it, in as sympathetic a spirit as possible, and try to discover, why, as a whole design, it is unsatisfactory and unpleasing.

Beauty is not so much a matter of excellence of detail, as it is a matter of the suitability and proportion of one part to another in any complicated work. This principle applies here very thoroughly. We cannot find much fault with the parts themselves, but in their relation, one to another, there is much lack of suitability and good proportion.

There is no objection to the legs, as there was in figure 131, for in this case, the base pan is of great importance itself in the whole design, and so may well be raised to a slight extent. It will be noticed, also, that the legs of this example are much lower in proportion than in the other.

The artistic trouble with this lamp is confined to the lion, the shaft and the oil pan.

The lion, being a supporting figure, shows far too much action, it should be more at rest and more solid in its appearance, where it is attached to the base pan; to raise it from the pan on insecure supports, and again to have both its front paws raised, accentuates the open space below it to too great an extent.

The shaft springing from the lion's back is disproportionately short compared with the parts below and above. It is a member of the composition which from its use and position should be of much greater prominence. Its attachment to the back of the lion, which is covered by the lion's wings, would be better if more insisted upon.

The next member, the oil pan, is dwarfed by the lion brackets beneath it, which are of too much projection though their fairly light effect is certainly in their favour.

The bird above the oil pan again swamps the pan, both from its too high position and its size.

To sum up the criticism, if the lion were more at rest in its action, and lower down on the base pan, and the shaft and the oil pan were both of more importance in size, and the bird at the top of less importance, the whole design would be very much improved.

In criticising in this way, my idea is by no means to insist so much on the obvious faults, as to point out how a really fine decorative conception, such as this lamp might be, is so often just not quite good, when measured by those universal standards of ornamental art which are neither Eastern nor Western in their application. To measure and criticise the art of one country by the local and narrow standards of a foreign country is neither fair nor logical, but all art, whether it be of East or West, is one in its great principles.

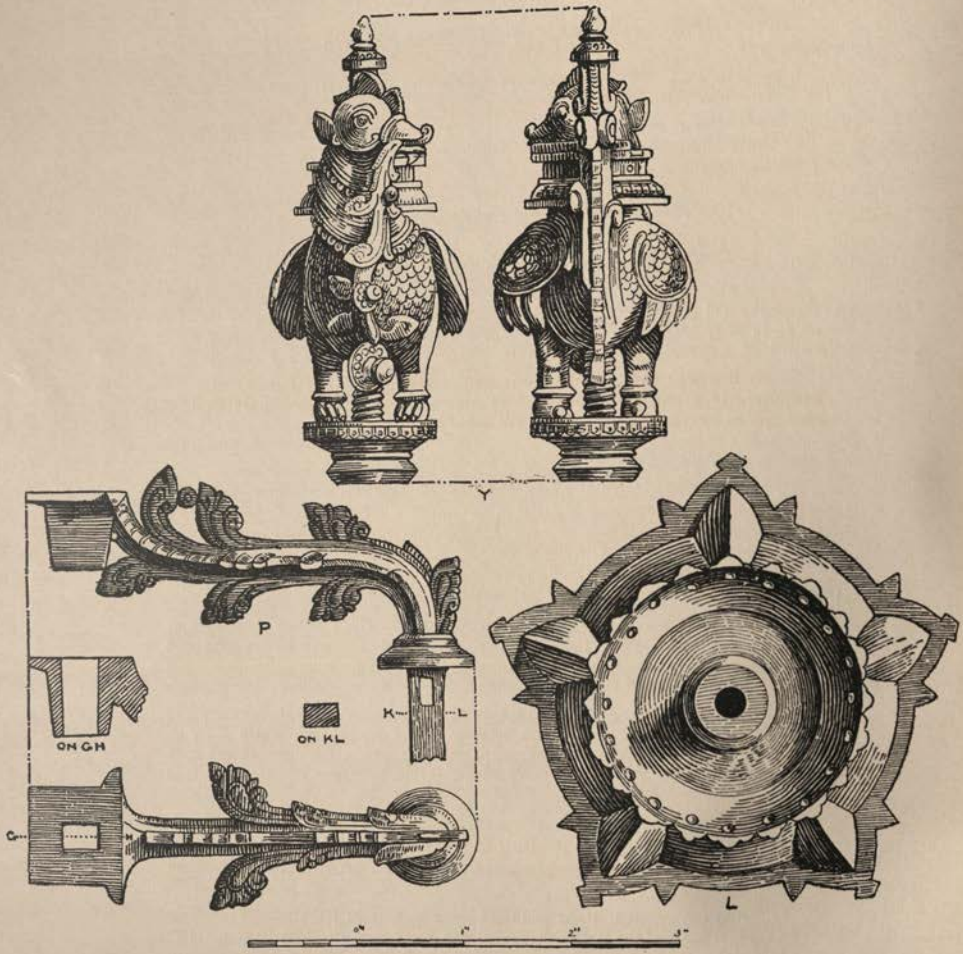


Fig. 135-A.

Fig. 135-A.

The drawings shew the front and back elevation of the bird at the top of the lamp (figure 135); the arms coming from the base, and which support the two small figures, and the bottom of the oil pan.

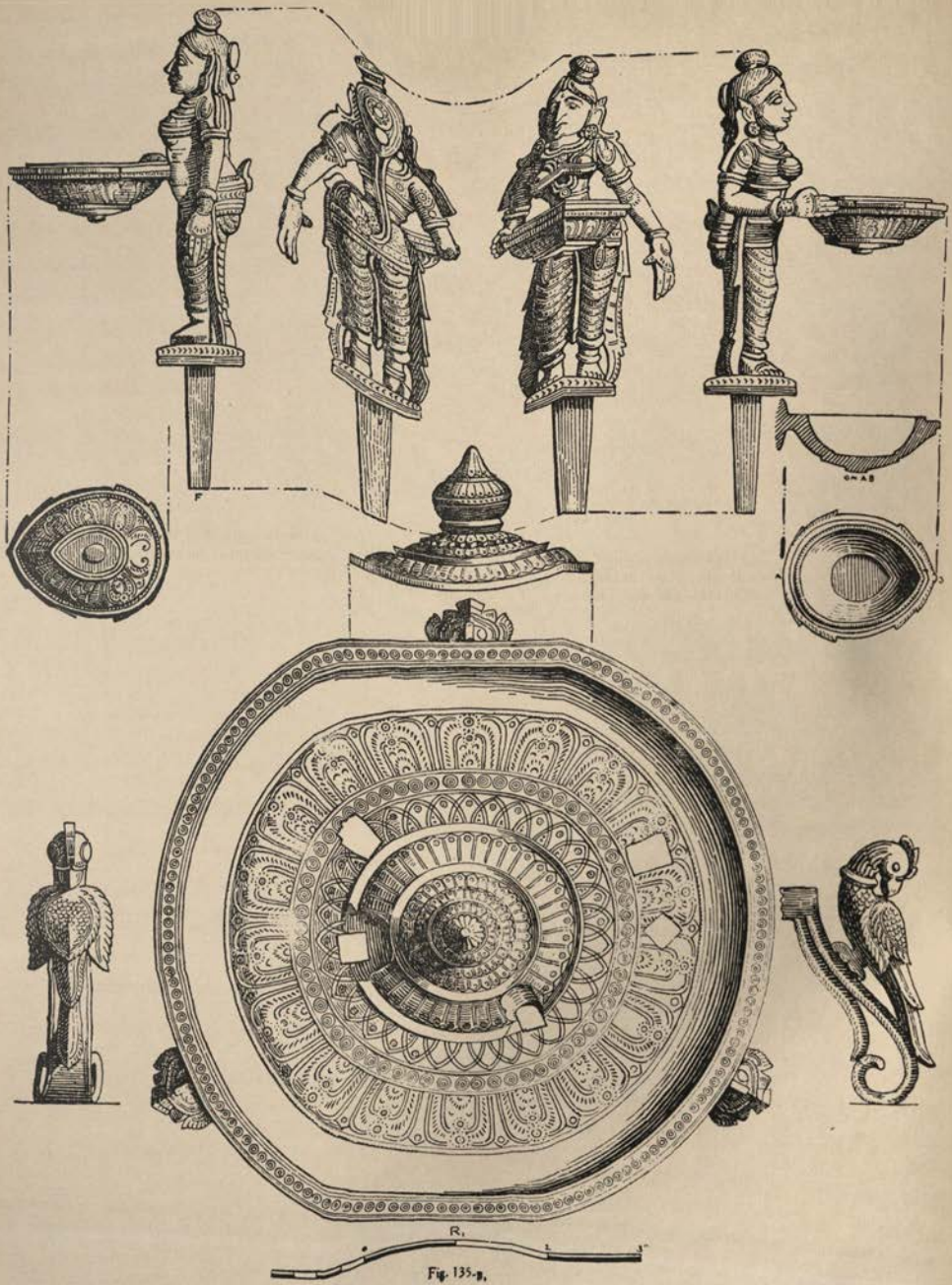


Fig. 135-B.

Fig. 135-B.

Here are shewn the details of the small figures, and of the base pan and legs, of the previously illustrated lamp. The care with which every part is finished, ornamentally, is well shewn by the base of the small oil pan held by the figures.

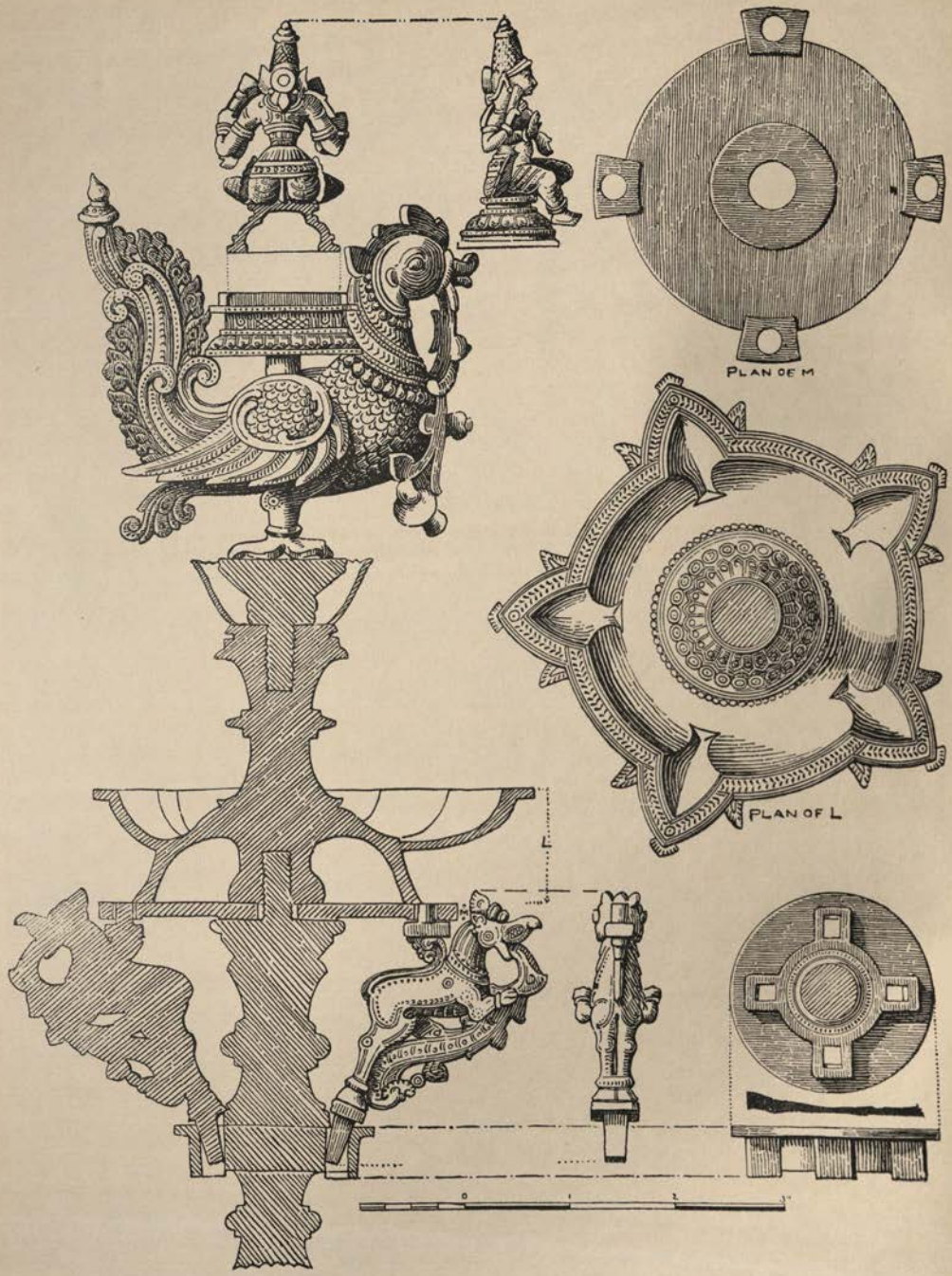


Fig. 135-c.

Fig. 135-C.

On this plate are given the top of the oil pan, sections and details of the brackets which help to support it, and of the bird and figure above, from the lamp (figure 135).

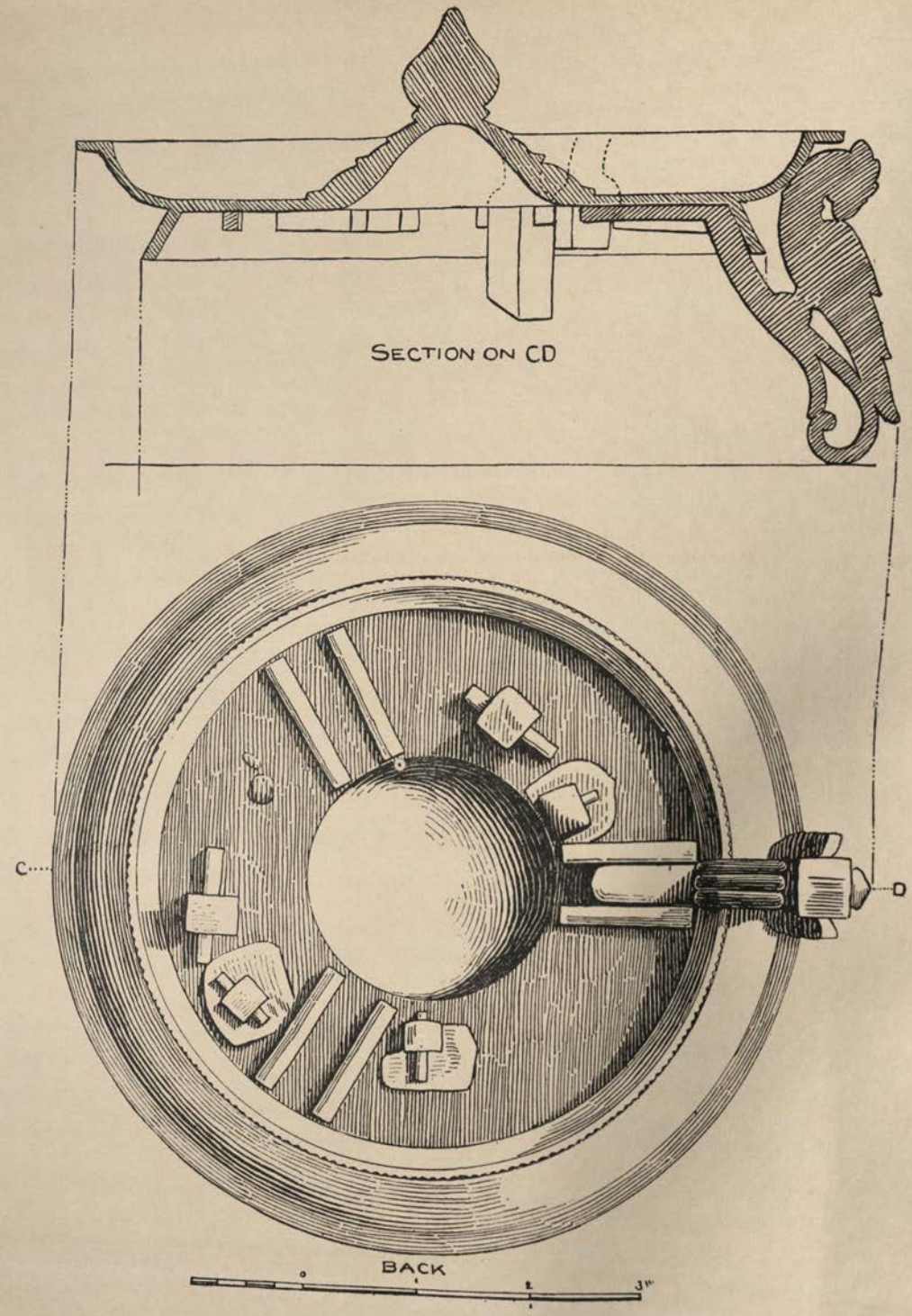


Fig. 135-D

Fig. 135-D.

The drawings show the plan, and side section of the base of the lamp (figure 135).

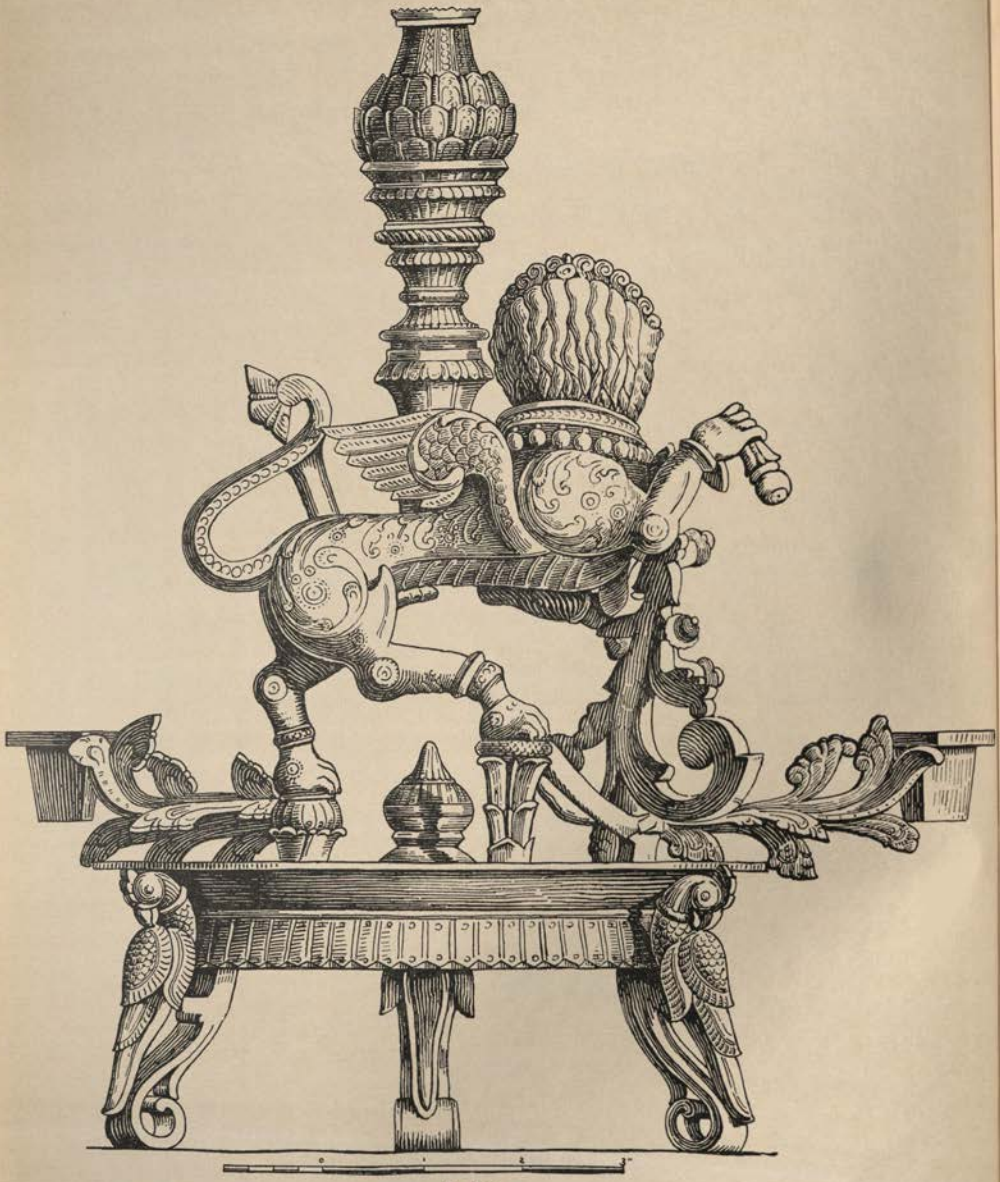


Fig. 135 E.

Fig. 135-E.

In this drawing the back view of the lion from the base of the lamp (figure 135) is shown.

The artistic weakness occasioned by the heavy shaft and upper parts, being supported from the thin back of the lion, with no solid underneath is here very apparent.

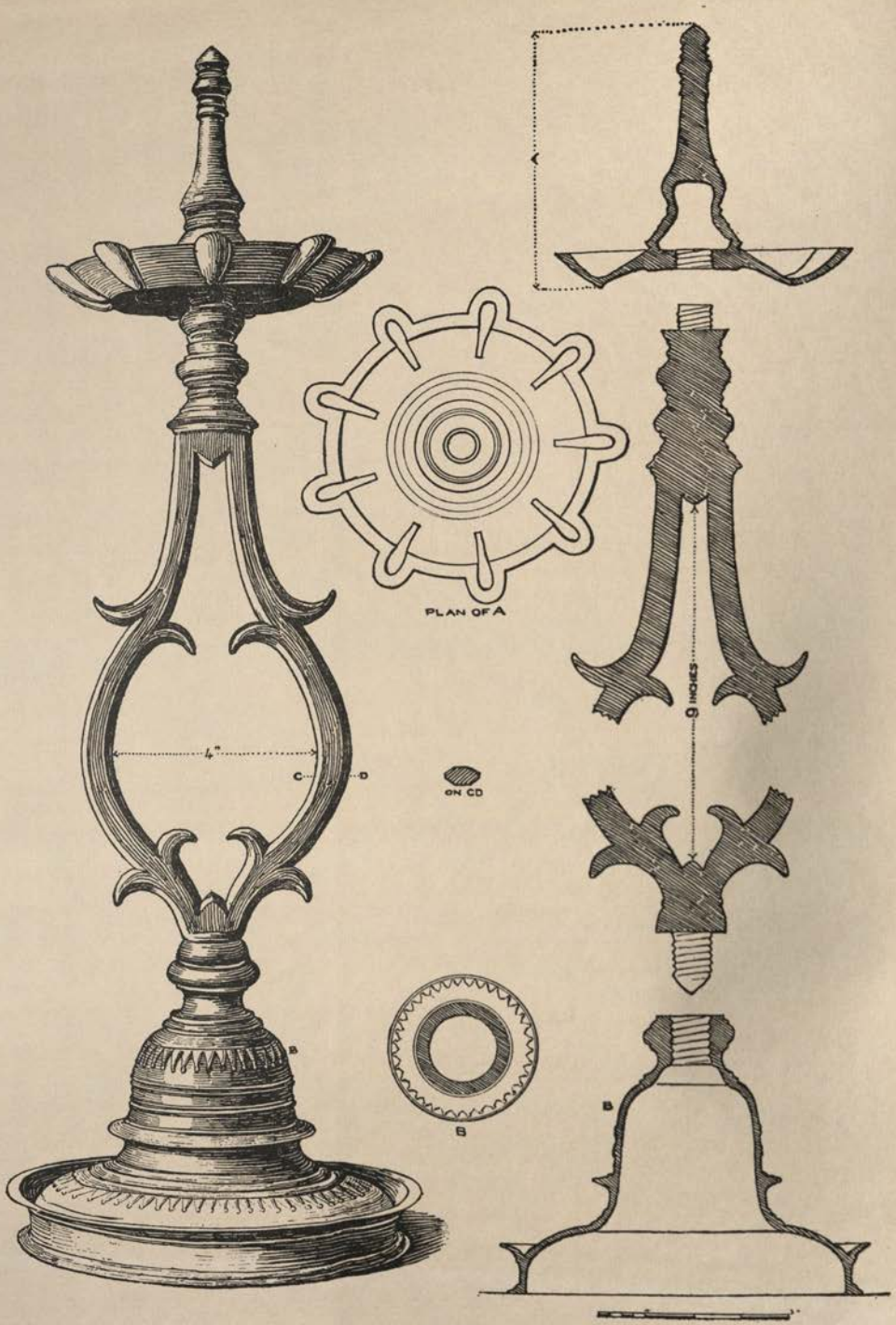


Fig. 136.

Fig. 136.

This lamp of brass for nine lights is of a somewhat uncommon pattern, the shaft being divided and open in the centre.

It is in the Government Museum.

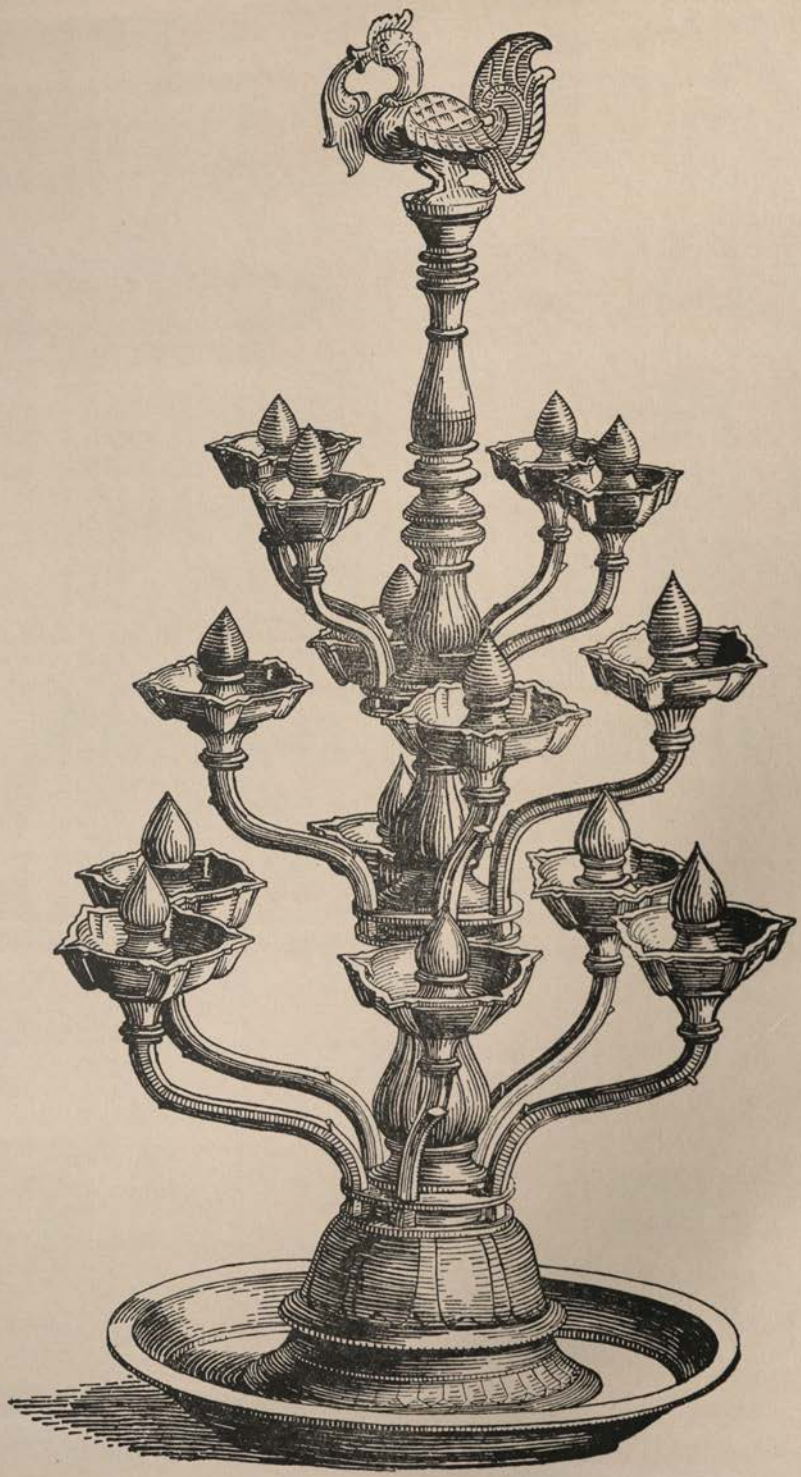


Fig. 137.

Fig. 137.

The lamp here illustrated is similar to that shewn in figure 126, but of smaller size and less finish.

It is fitted with 14 oil pans, each for five lights.

It is in the Government Museum.

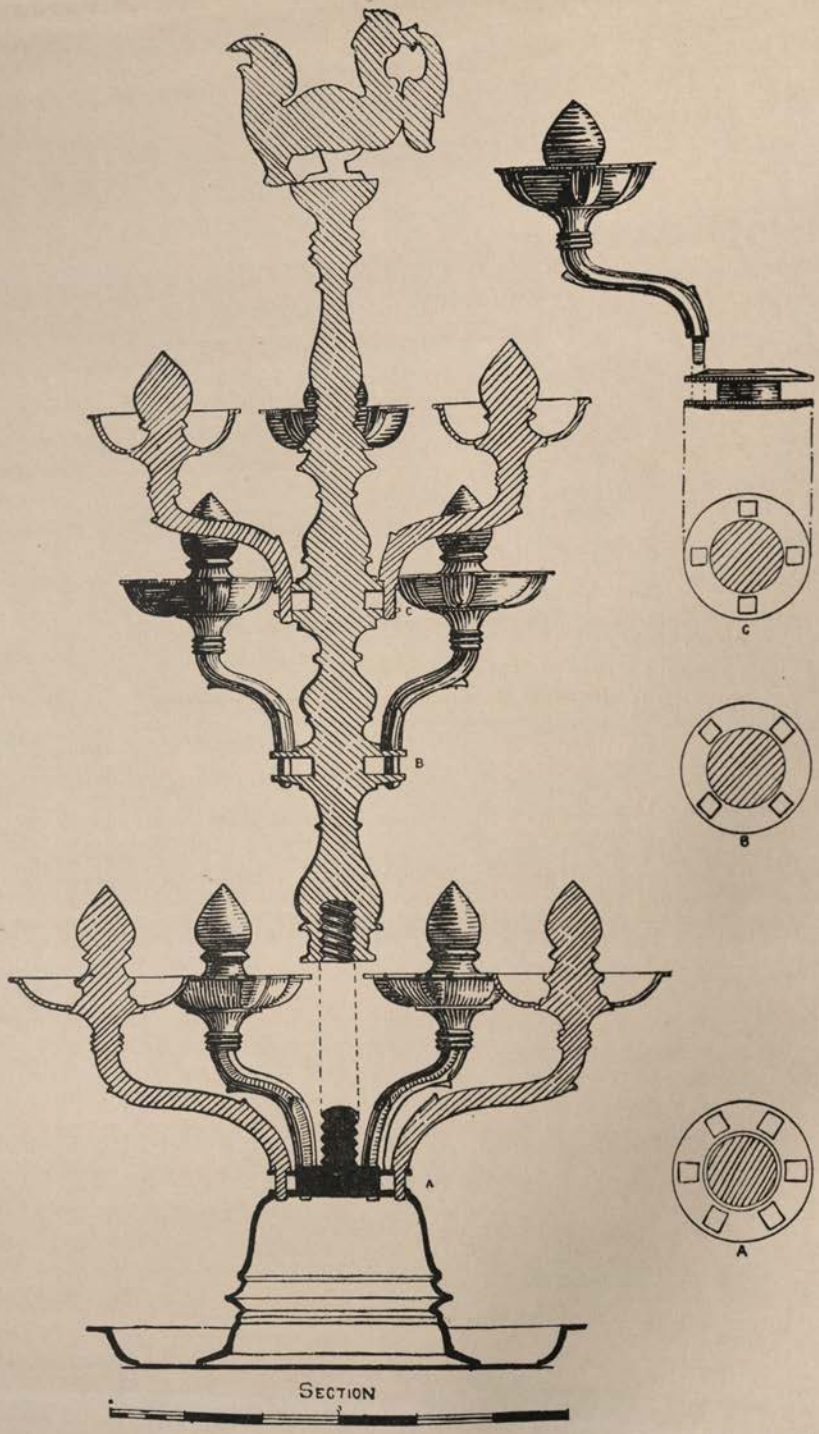
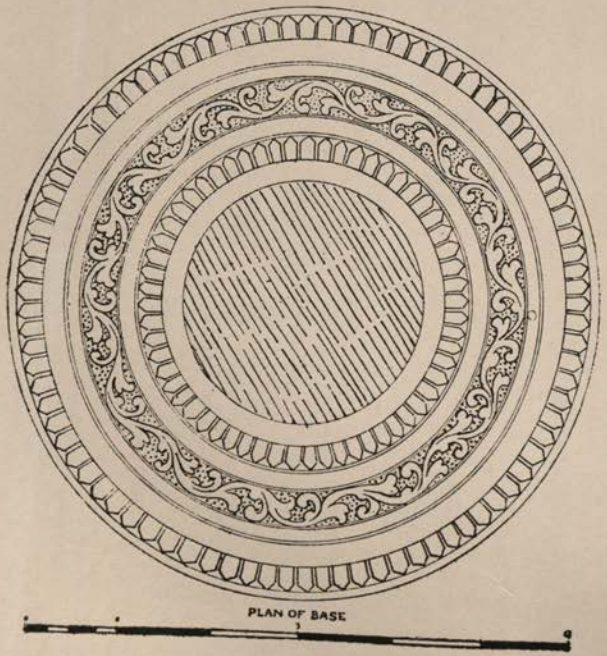


Fig. 137 A

Fig. 137-A.

The section of the preceding lamp is shown on this plate.



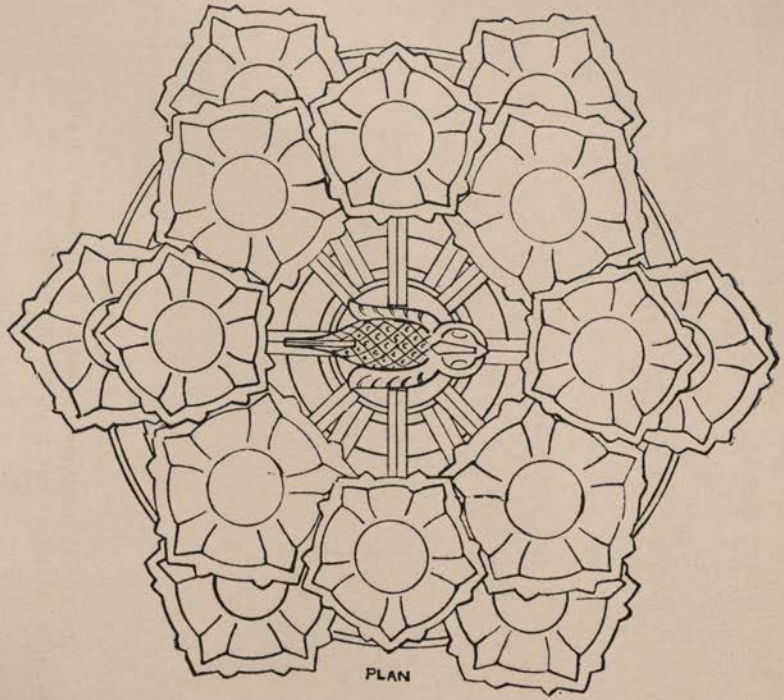


Fig. 137-a.

Fig. 137-B.

The plan of the oil pans shewing six on the lowest tier and four on each of the other two tiers is here given, together with the base of the lamp (figure 137).

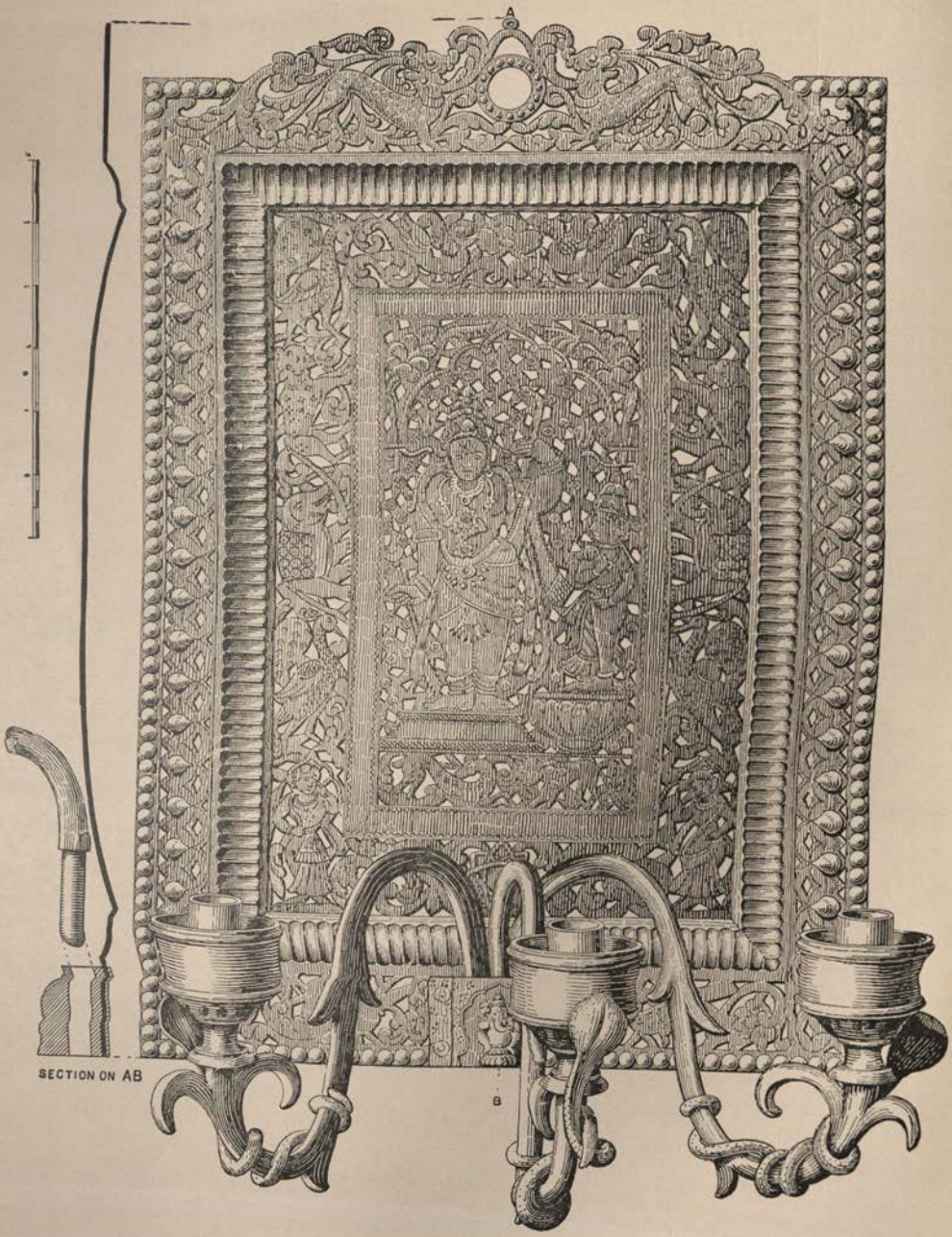


Fig. 138.

Fig. 138.

This brass sconce is an excellent example of the adaptation of Indian forms to Western uses.

The back plate, which goes against the wall, is of the same sort of pierced and incised sheet metal-work employed in making the well-known "Vellore" trays.

The candle-holders are fitted with an outer rim to hold a glass shade, very necessary in draughty rooms.

The great increase in the use of electric lighting apparatus offers a wide field for designing suitable fittings of good Indian patterns, and an article of this sort, very slightly modified to receive the necessary wires and lamps would be infinitely more suited to Indian uses than the ugly modern patterns now so commonly found.

This specimen is in the Government Museum.

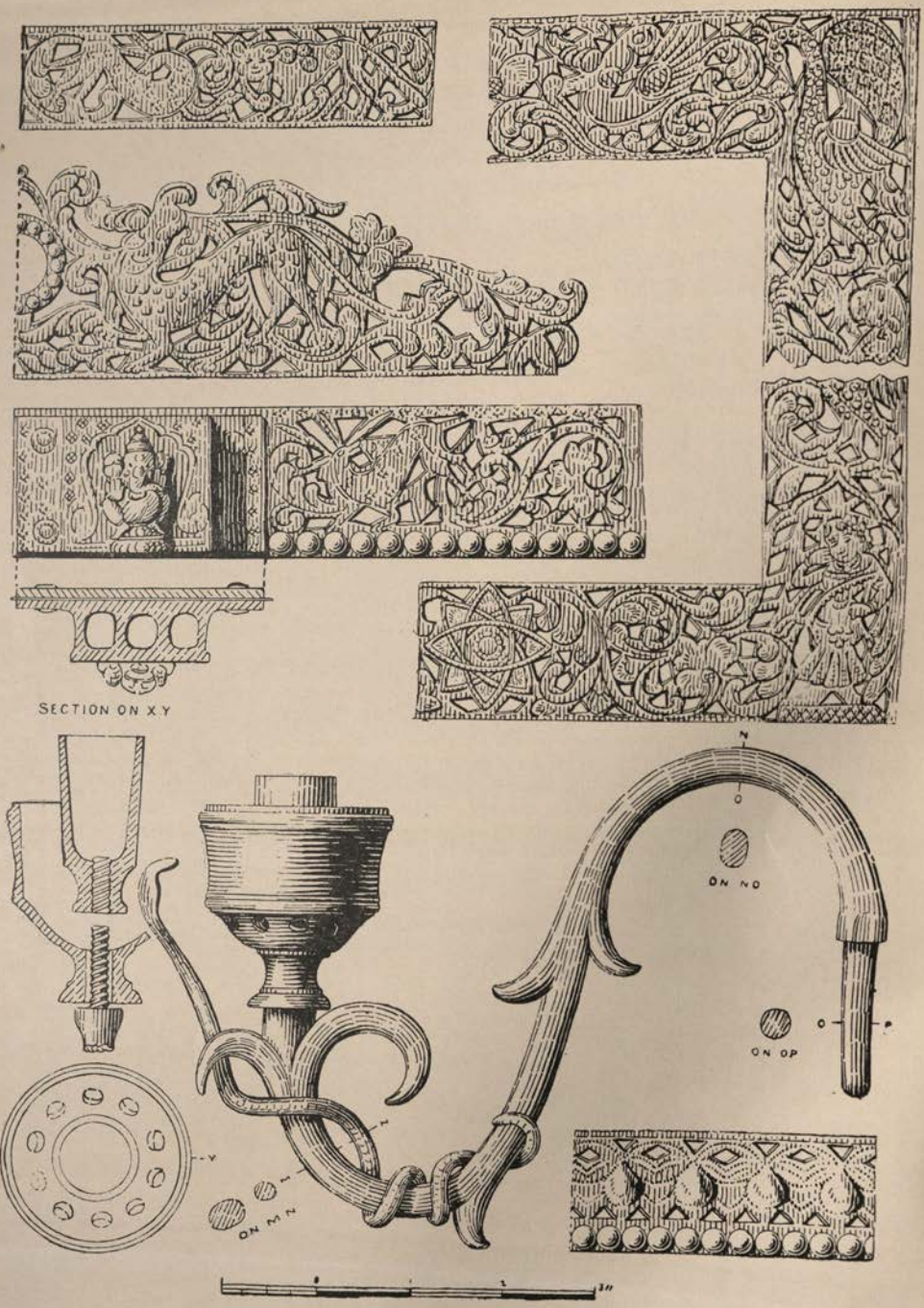


Fig. 138-A

Fig. 138-A.

The drawings shew the details of the preceding sconce.

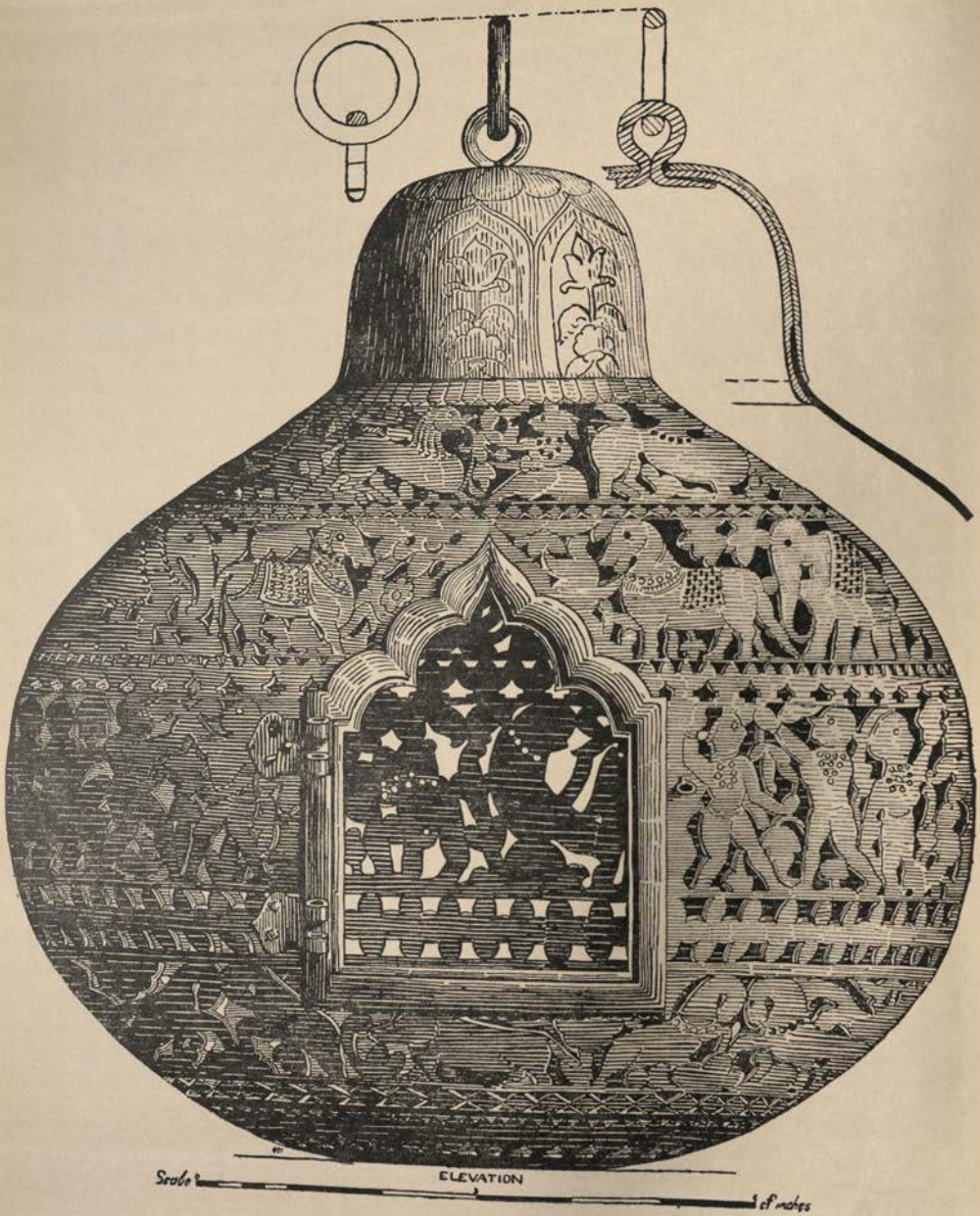


Fig. 139.

Fig. 139.

This hanging lamp is a fine example of pierced work. It is of a gourd shape, with a door at one side and a ring above for suspension.

Although the door, particularly, and the general form generally, suggest Mussalman influence, the details and pattern are mostly Hindu.

It was probably made in Northern India.

It is of copper and in the Government Museum.

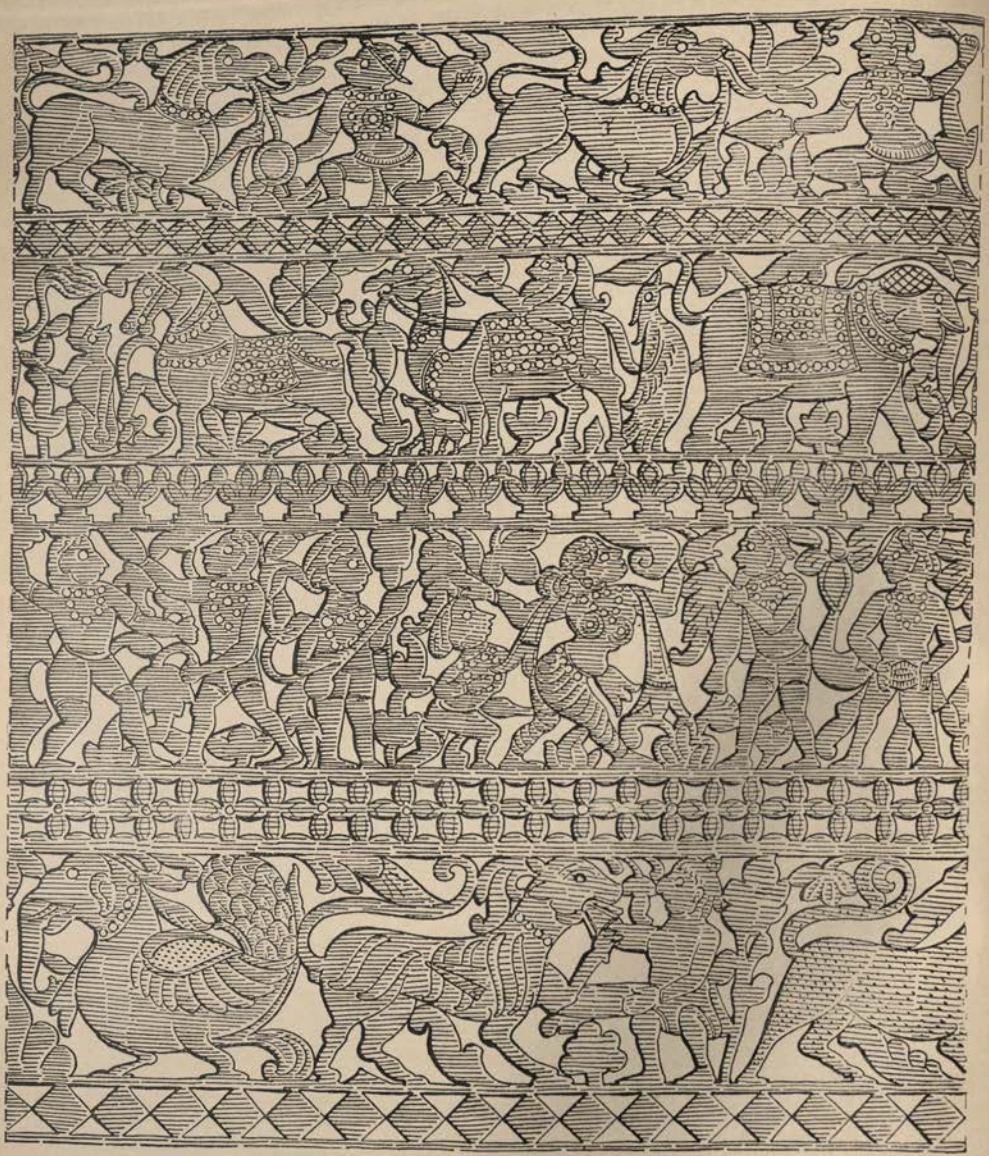


Fig. 139-A.

Fig. 139-A.

The details of the preceding figure drawn out flat shew the character of the decoration very well.

Above and below are bands of beasts, birds, and men, and the second band from the botom shews a dancer with musicians.

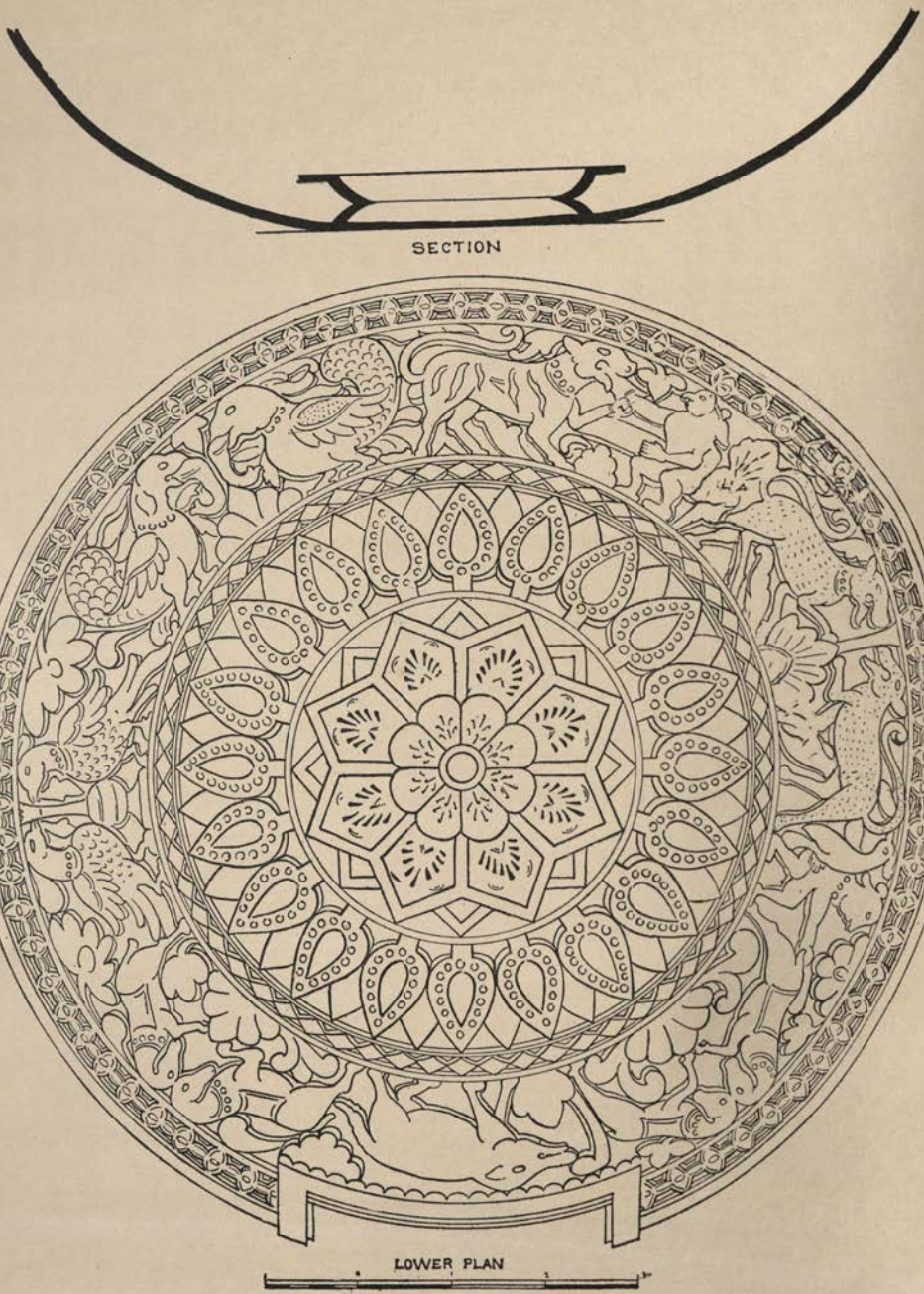


Fig. 139 a.

Fig. 139-B.
This shews the plan and section of the base of the lamp (figure 139).

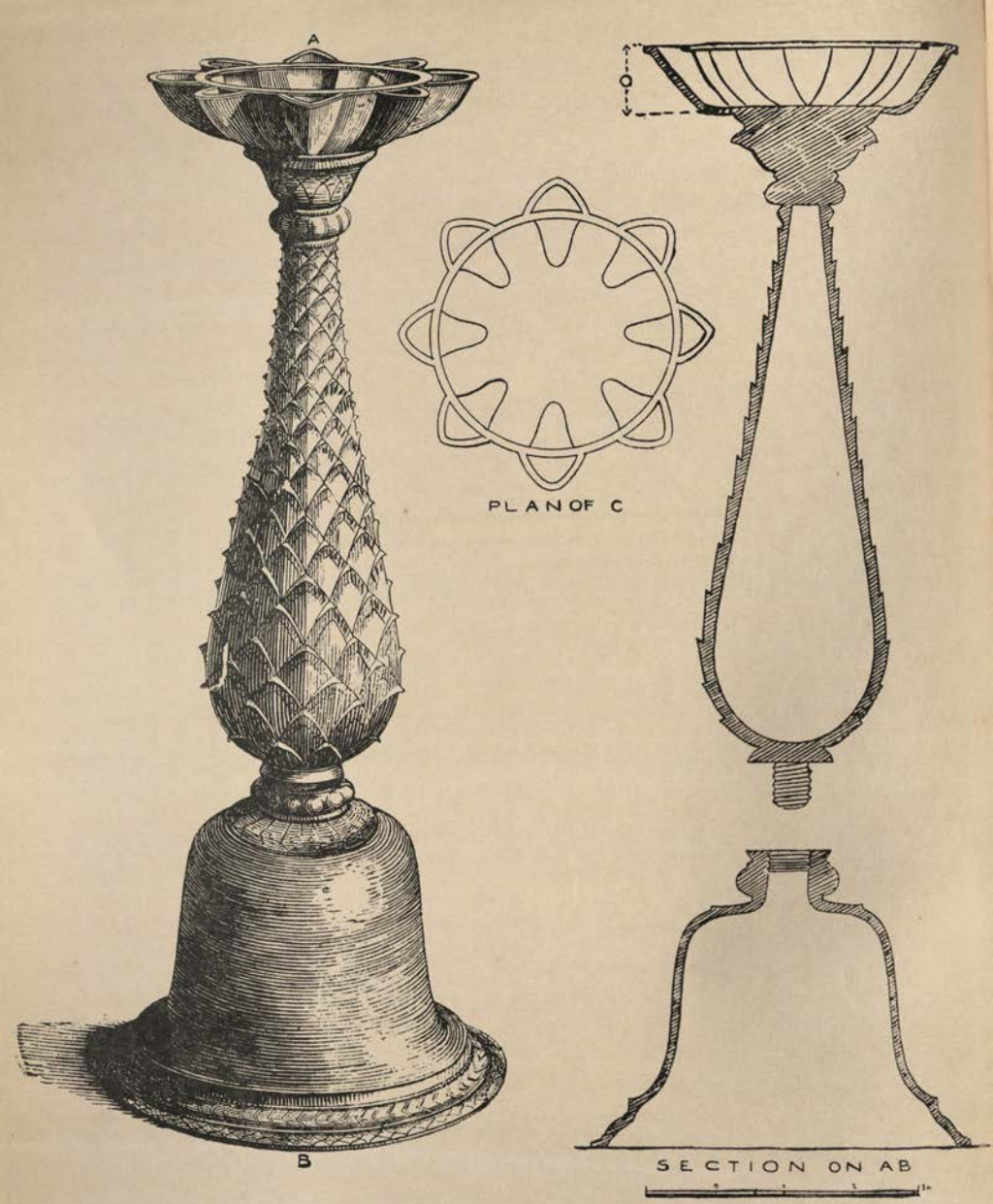


Fig. 140.

Fig. 140.

This standing lamp of brass is a form used by Mussalmans.
The plain bell-shaped base contrasts well with the scale pattern of the stem.
It is in the Government Museum.

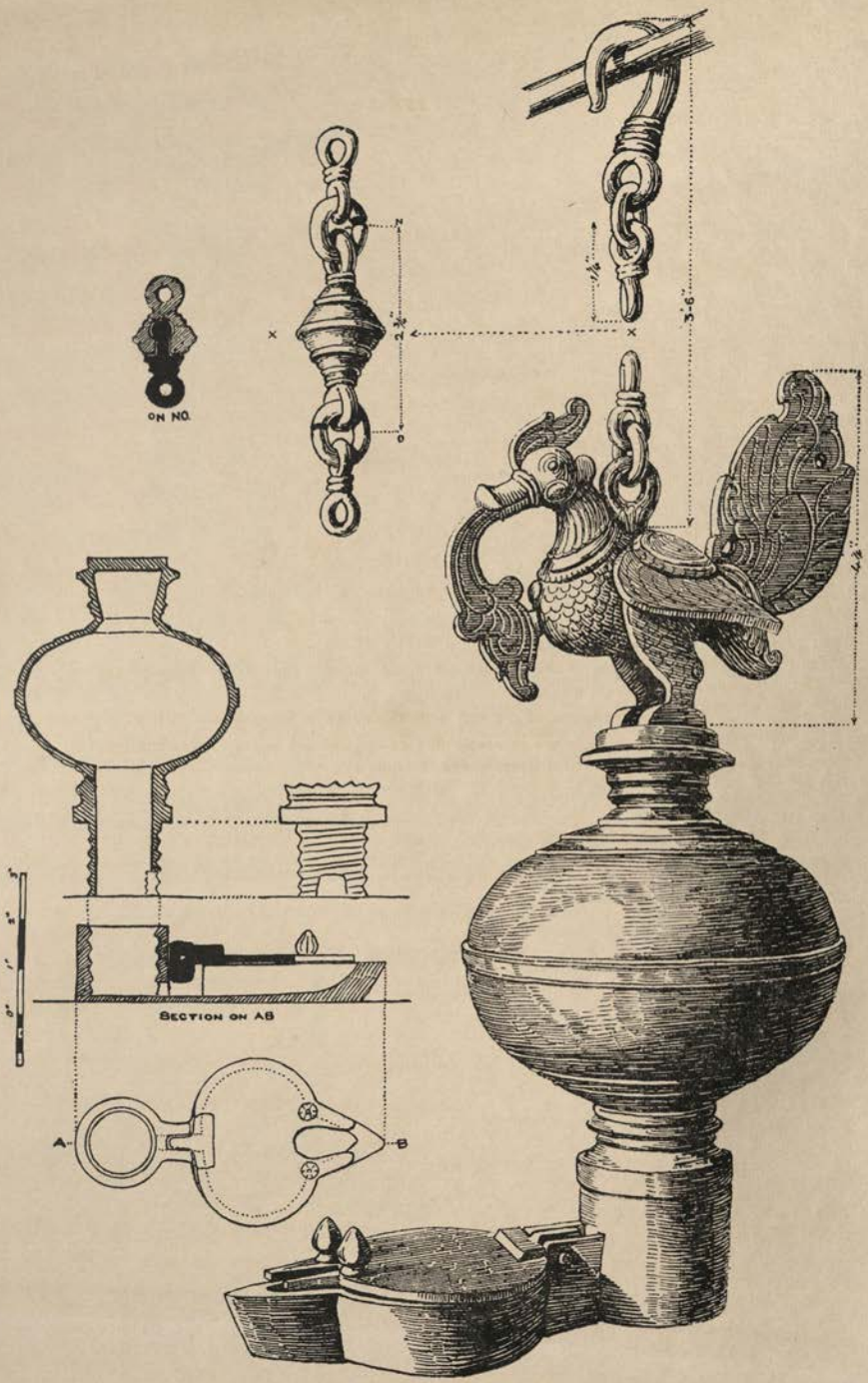


Fig. 141.

Fig. 141.

Hanging lamps of this pattern are found more commonly in Ceylon than in Southern India.

The bird, however, at the top is of characteristic South Indian pattern.

The large bulb is the reservoir for the oil, and the section shews the internal arrangement. It is in the Government Museum.

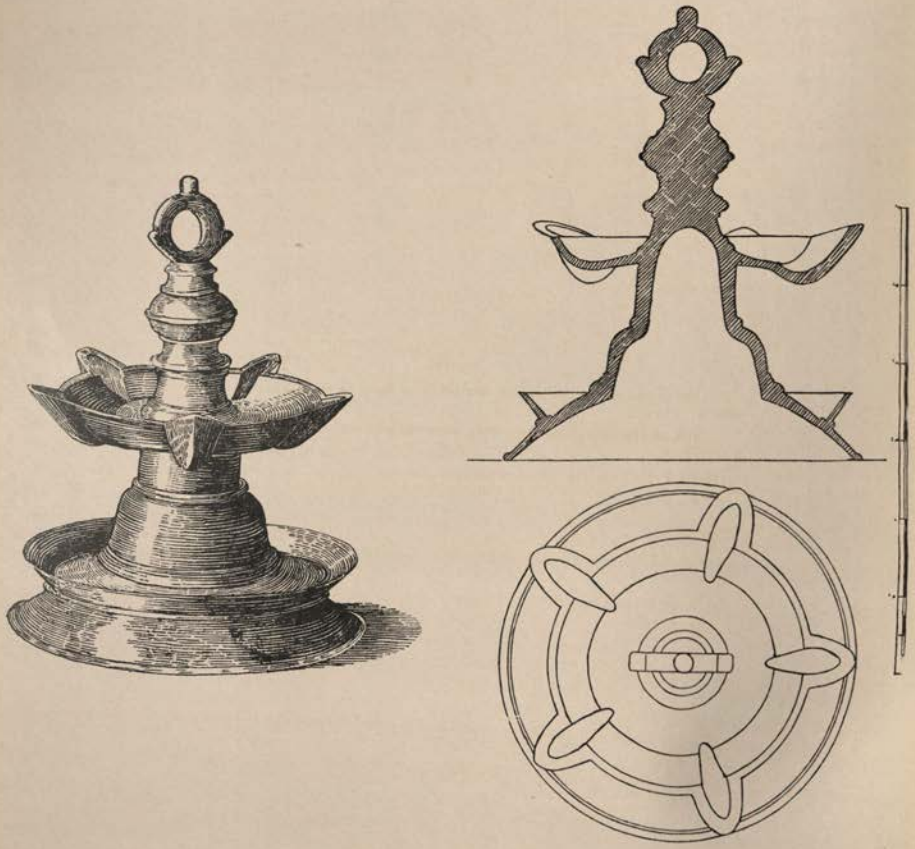


Fig. 142.

Fig. 142.

This shews the very common form of brass lamp in general use in the older bazaars.

It is rapidly being displaced every where by the ugly imported kerosine lamps of the West.

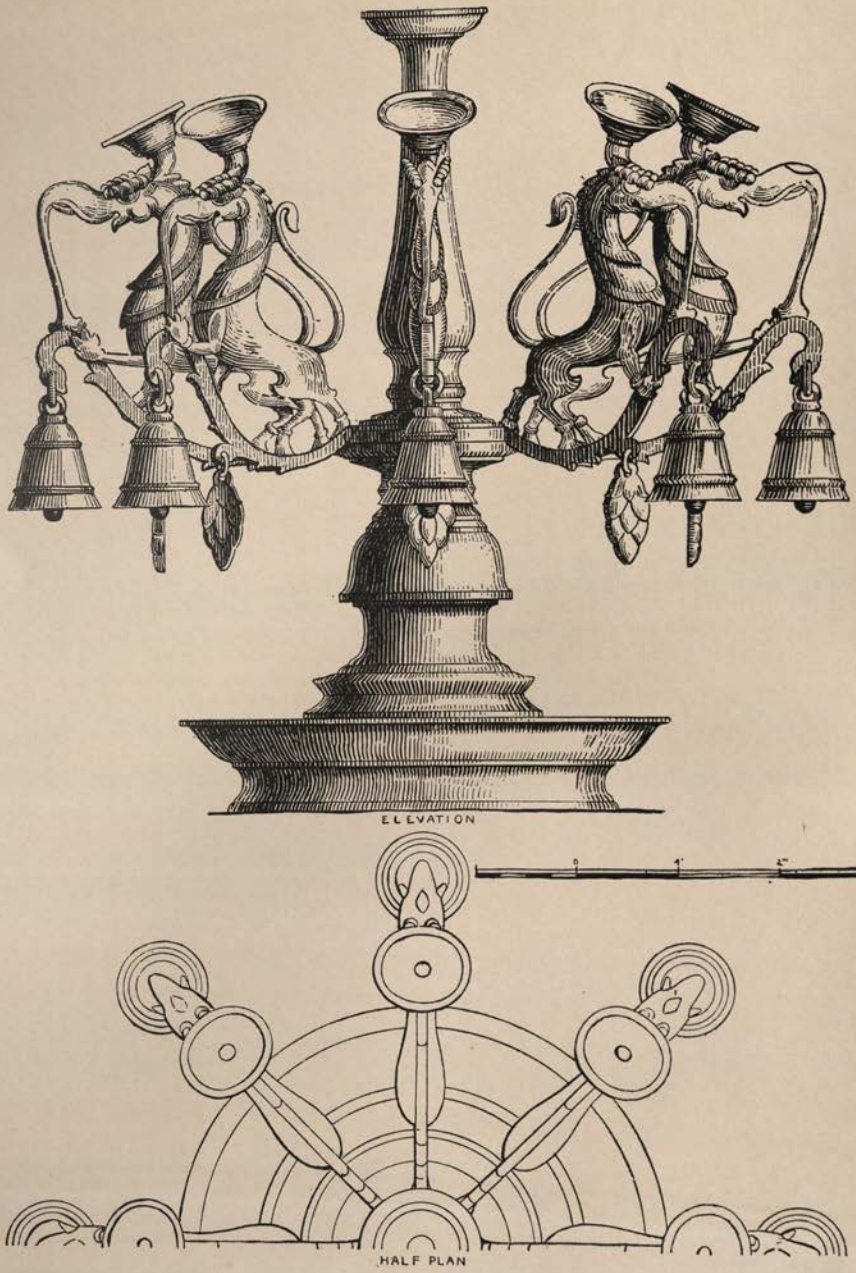


Fig. 143.

Fig. 143.

This drawing is of a camphor-burner used when doing Puja.

Eight small pans supported by "yalis" (a figure with a lion's body and elephant's trunk) surround a larger pan in the centre.

The specimen is of brass and bell-metal and in the Government Museum.

These camphor-burners are of various forms but mostly follow the plans of oil lamps. Camphor is a favourite article for sacrificial purposes among the Hindus.

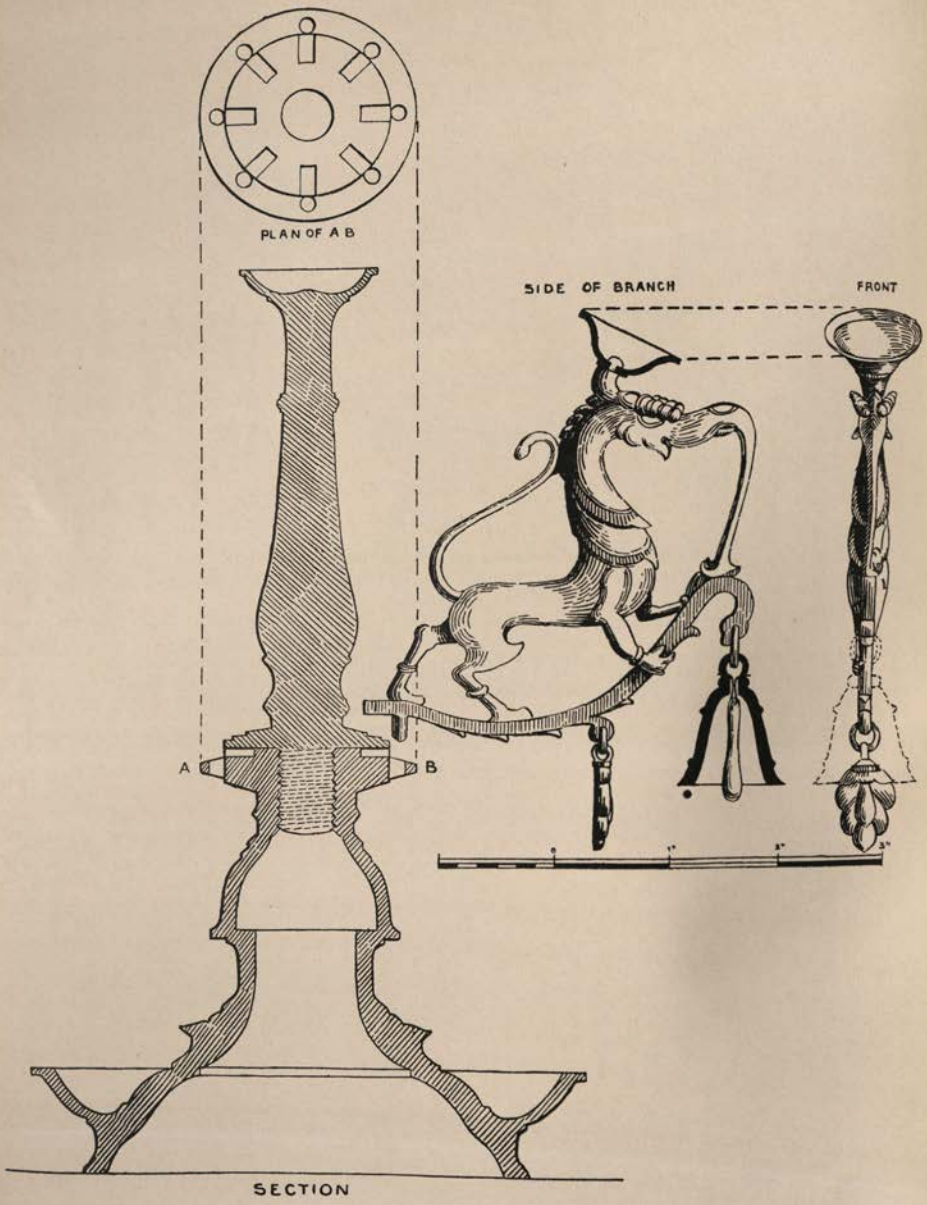


Fig. 143-A.

Fig. 143-A.

The drawings shew the section and details of the preceding figure.

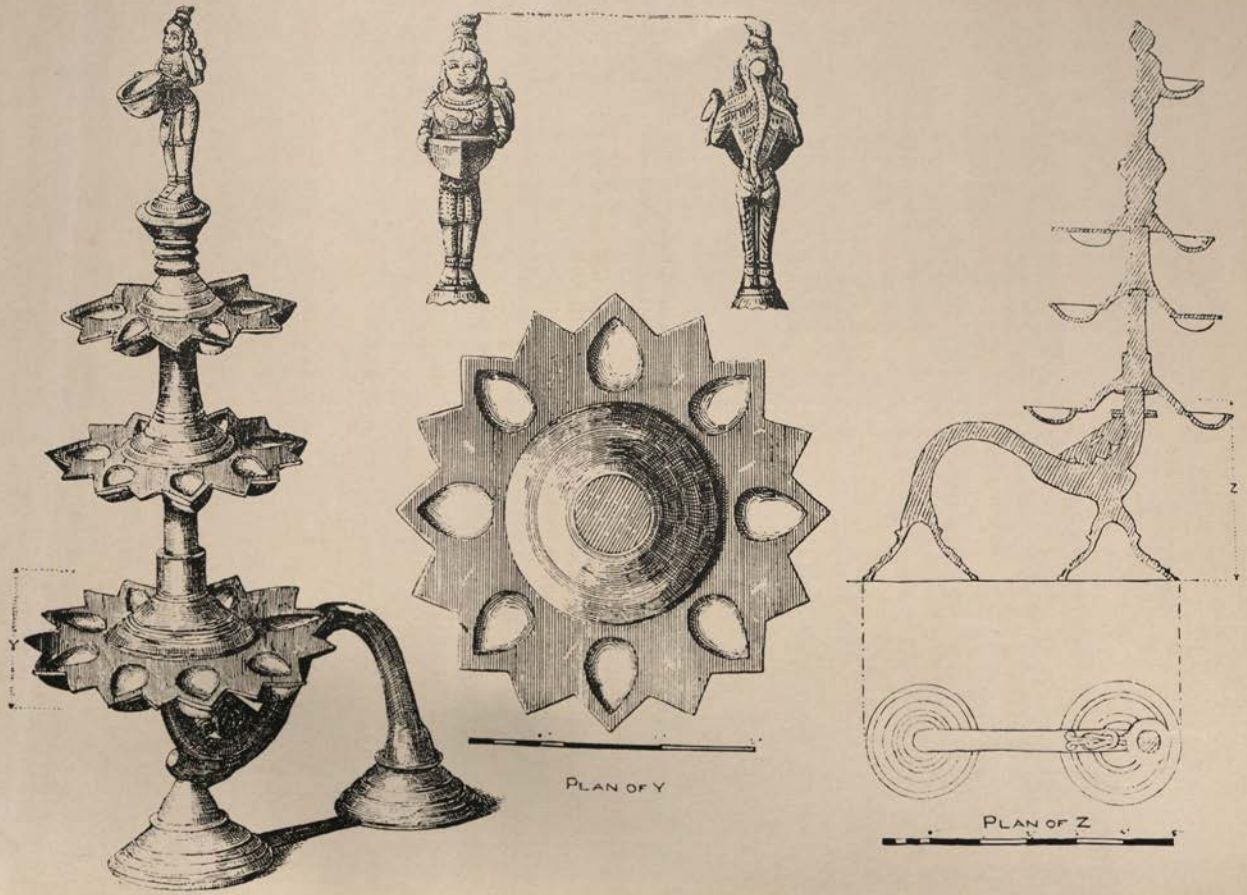


Fig. 144.

Fig. 144.

This small brass hand lamp is used for burning ghee during Puja.

The base is in two parts with a curved connecting rod between, which forms the handle.

There are three tiers of pans for the ghee each for eight wicks and a small figure above in the same form as that of the lamps (figures 112 & 113).

It is in the Government Museum.

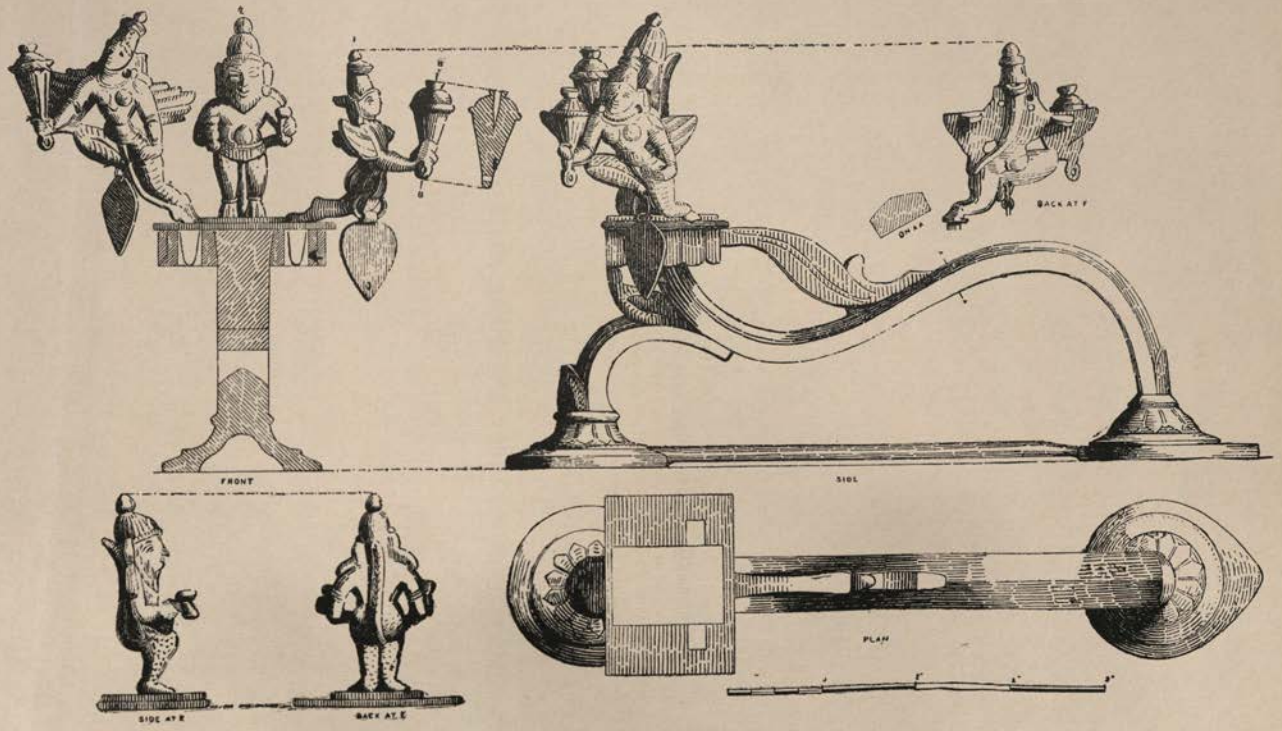


Fig. 135.

Fig. 145.

This stand is of the same class of articles as the preceding figure, but in this case instead of pans for burning ghee, small holders are provided, into which incense sticks are inserted and lighted when the devotee is worshipping.

It is in the Government Museum.

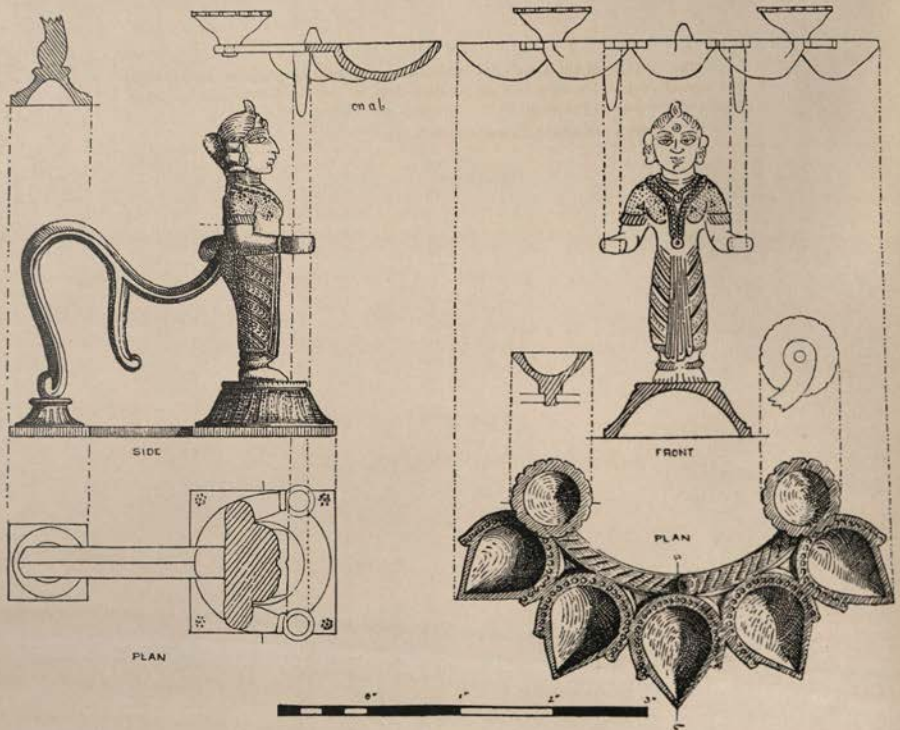


Fig. 146.

Fig. 146.

This is a combination lamp for burning both ghee and camphor during Puja. The form of a figure holding the oil pans is very usual, in this case five pans are provided for the oil and two for camphor.

It is of brass and is in the Government Museum.

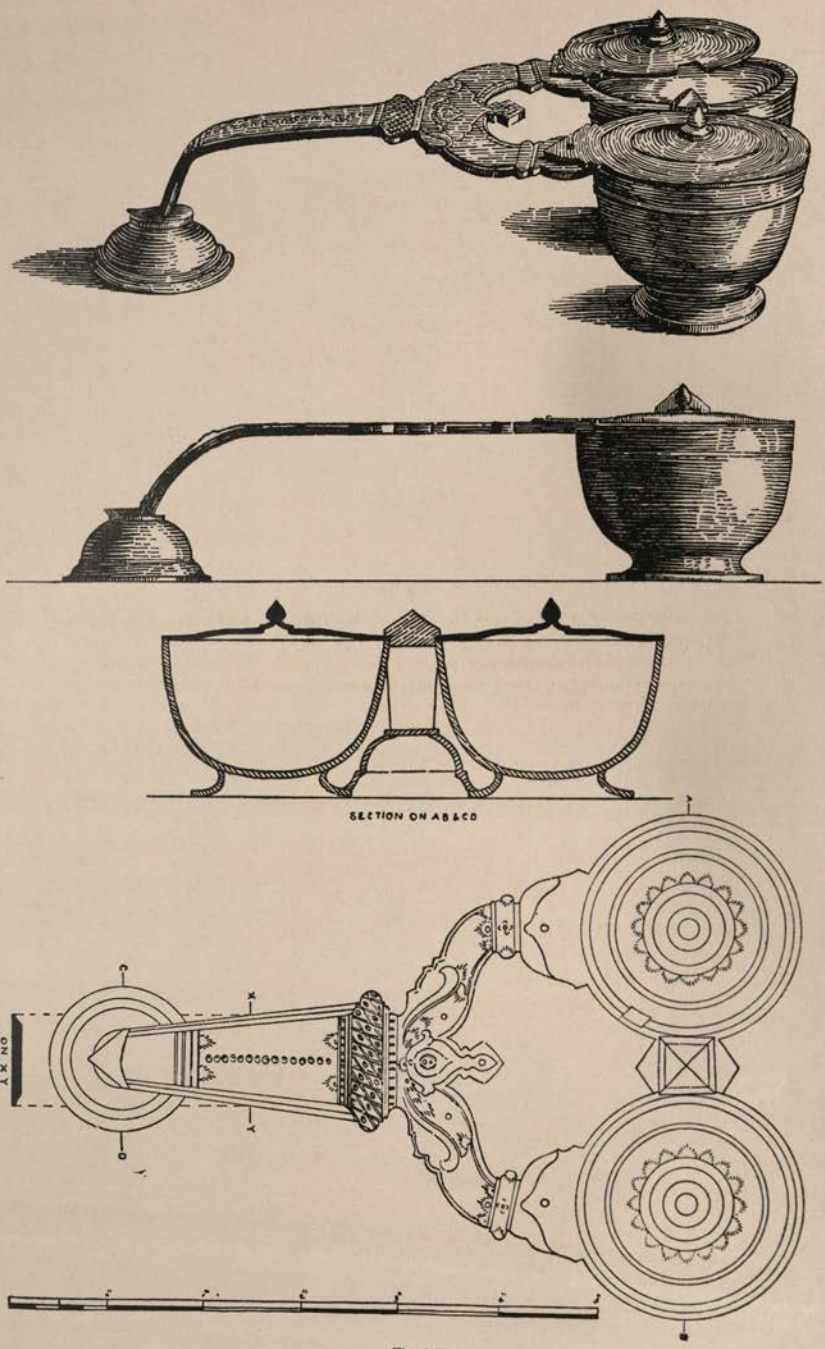


Fig. 147.

Fig. 147.

This pair of covered cups is used when taking an oil-bath, to contain the two sorts of oil used on the body and on the hair.

This is rather an elaborate example with a handle and covers for the cups, the more common form being two almond-shaped cups without covers on a simple stand as shown in figure 150.

It is of brass and is in the Government Museum.

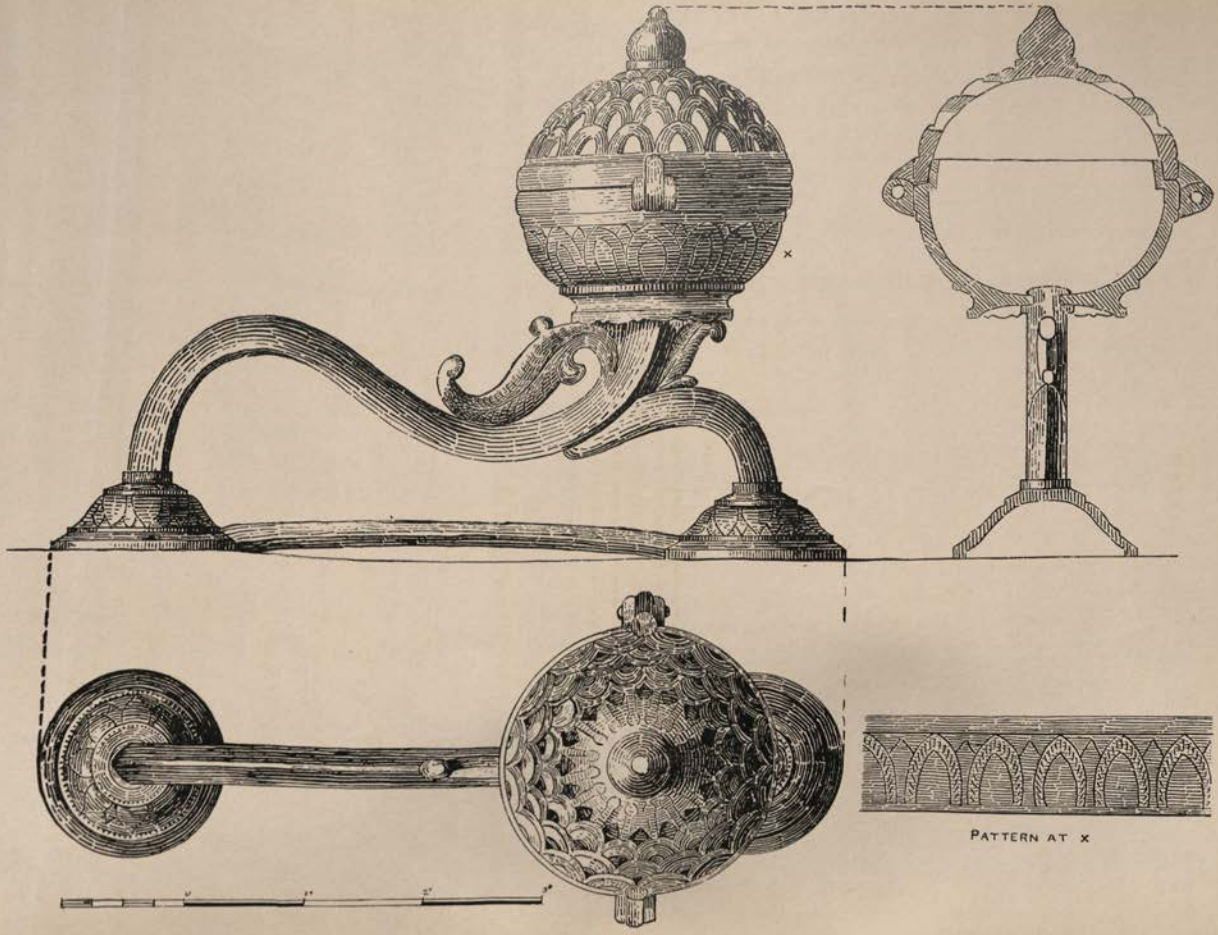


Fig 148

Fig. 148.

This brass censer belongs to the same class of articles as figures 144, 145 and 146. The lower section of the bowl is for containing the fire and incense, generally benzoin, and the perforated cover allows the fumes to escape.

A similar article was in use among the ancient Romans.

The specimen is in the Government Museum.

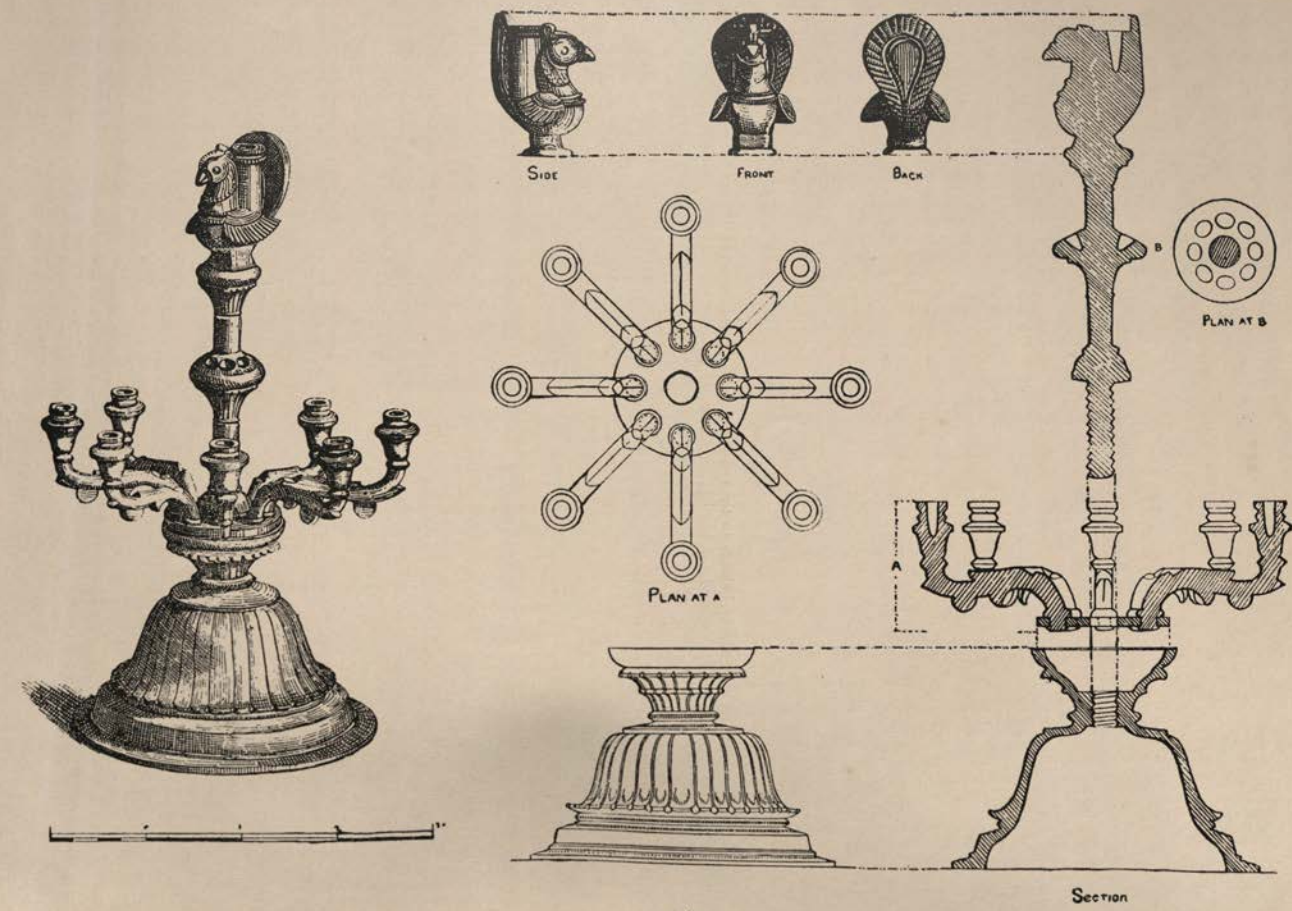


Fig. 149.

Fig. 149.

A stand for incense sticks arranged to hold 17 separate sticks.
It is of brass and in the Government Museum.

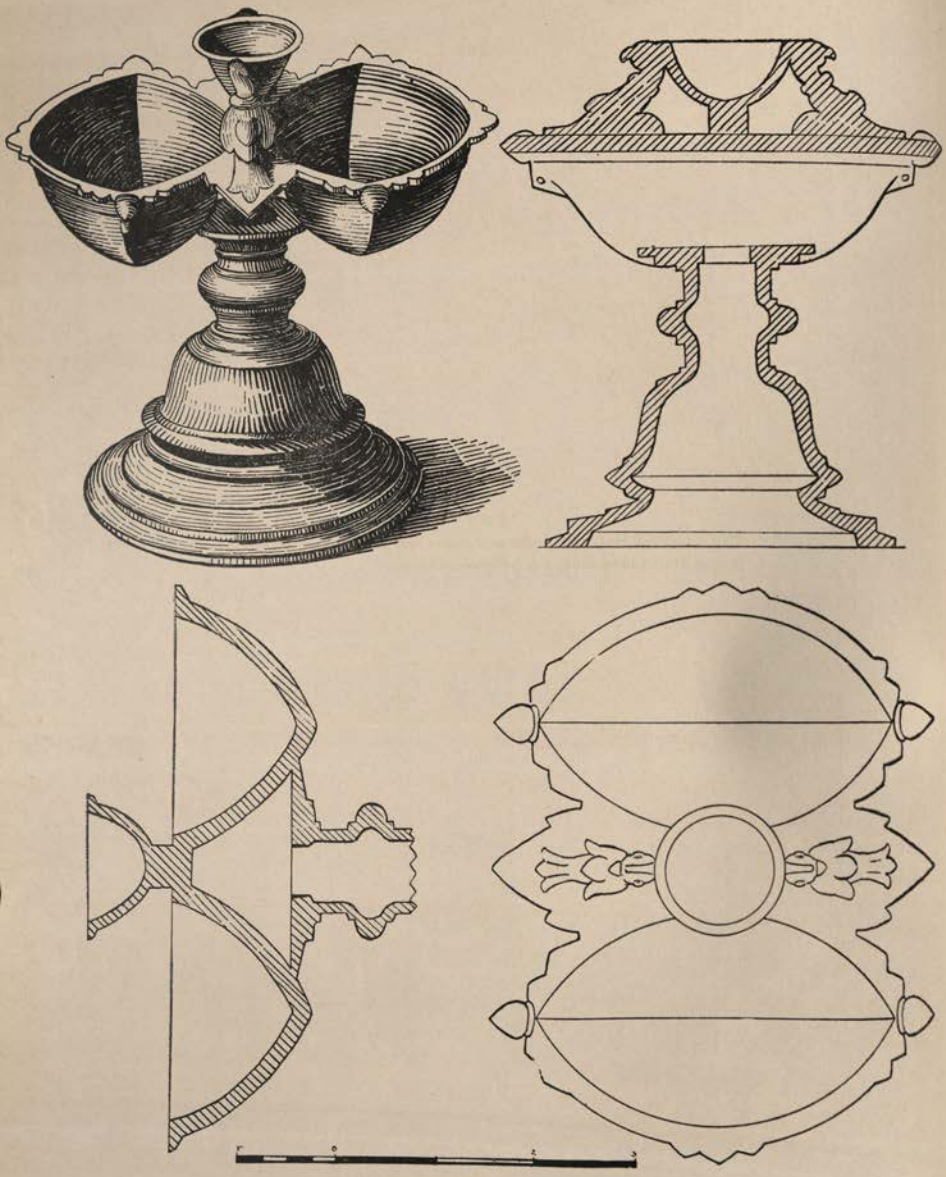


Fig. 150.

Fig. 150.

This pair of oil cups on a simple-bell shaped stand is an usual form. It is of brass and is in the Government Museum.

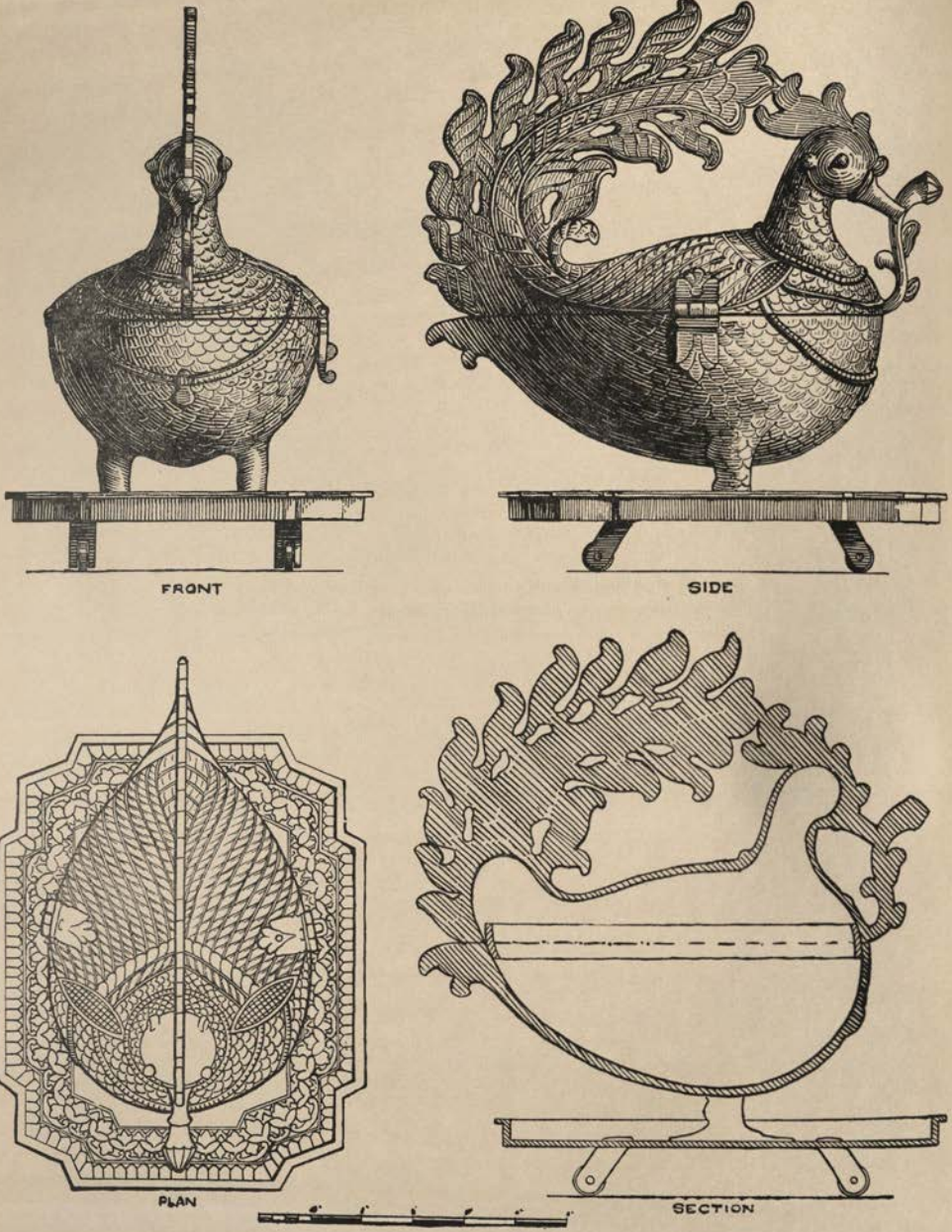


Fig. 151.

Fig. 151.

This box, on a tray mounted on wheels, is intended for betel-leaves. The box takes the form of a swan, the upper part forming the lid. It is of brass and is in the Government Museum.

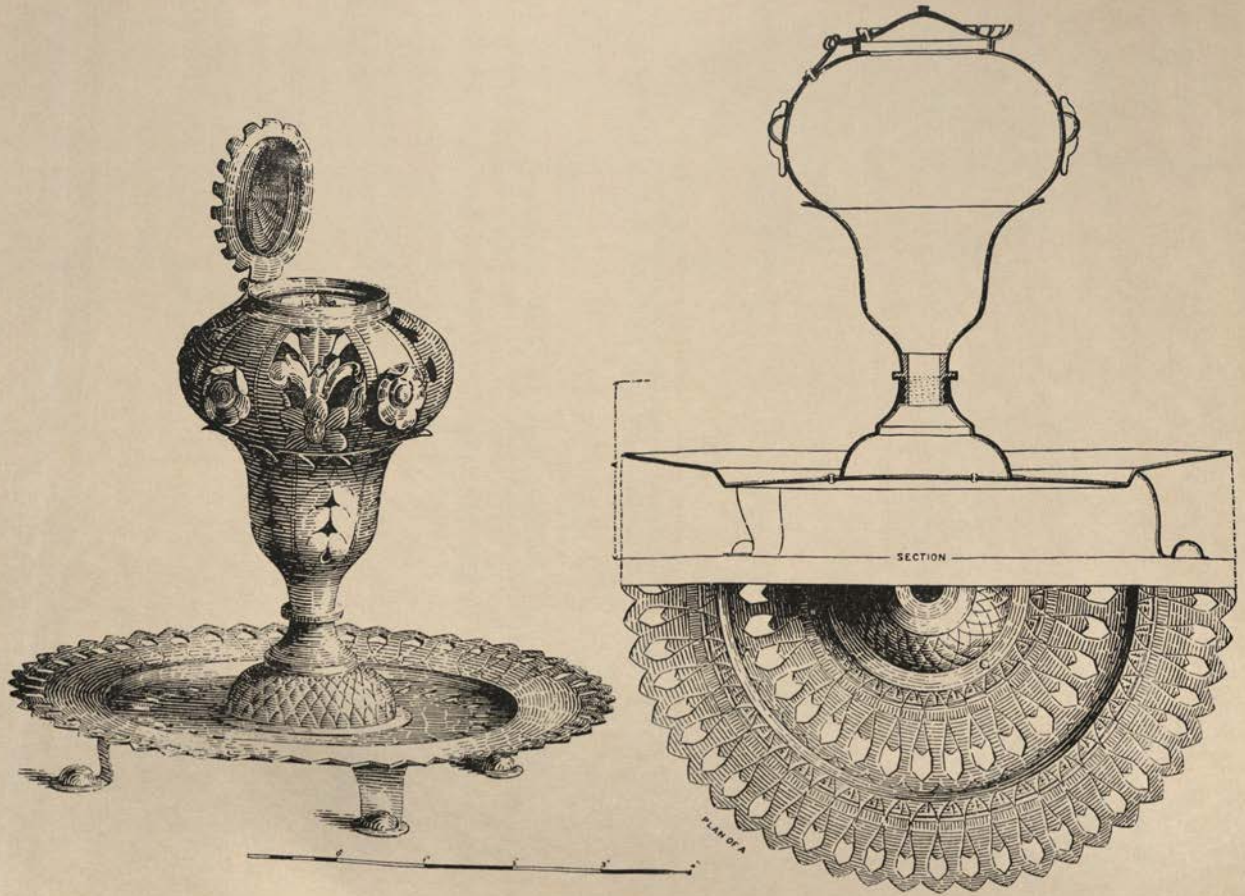


Fig. 152.

Fig. 152.

This benzoin-burner is mounted in the centre of a small circular tray on legs. It is of brass and is in the Government Museum.

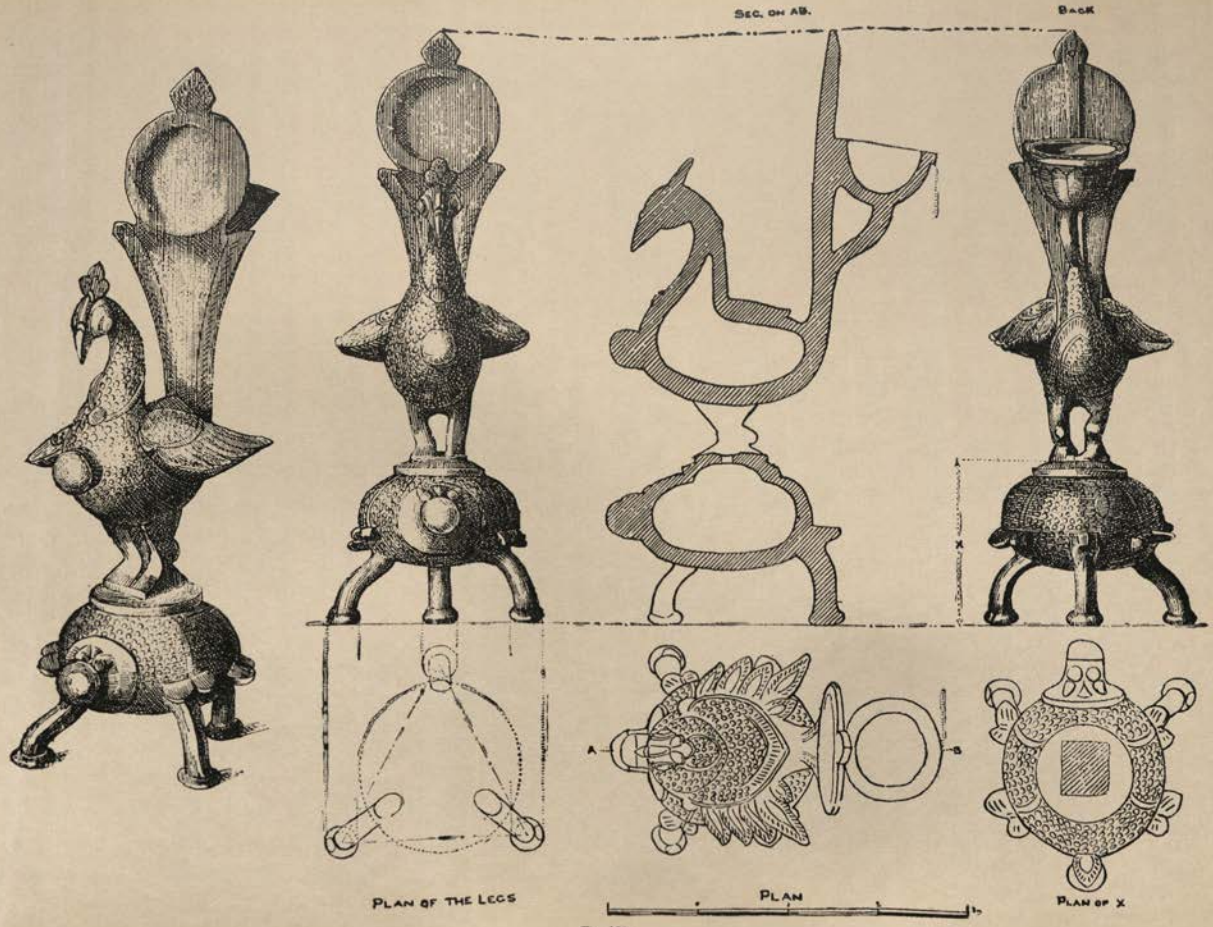


Fig. 153.

Fig. 153.

The illustration shews a brass receptacle for "bottu" powders and scents, with which is combined a small mirror.

The form, which is intended to represent a peacock standing on a three-legged tortoise, is an usual one.

The upper part of the peacock's tail forms the mirror, and at the back of the tail is a cup. The bird and tortoise are both hollow, with stoppers, though the sectional drawing does not shew that these are removable.

It is in the Government Museum.

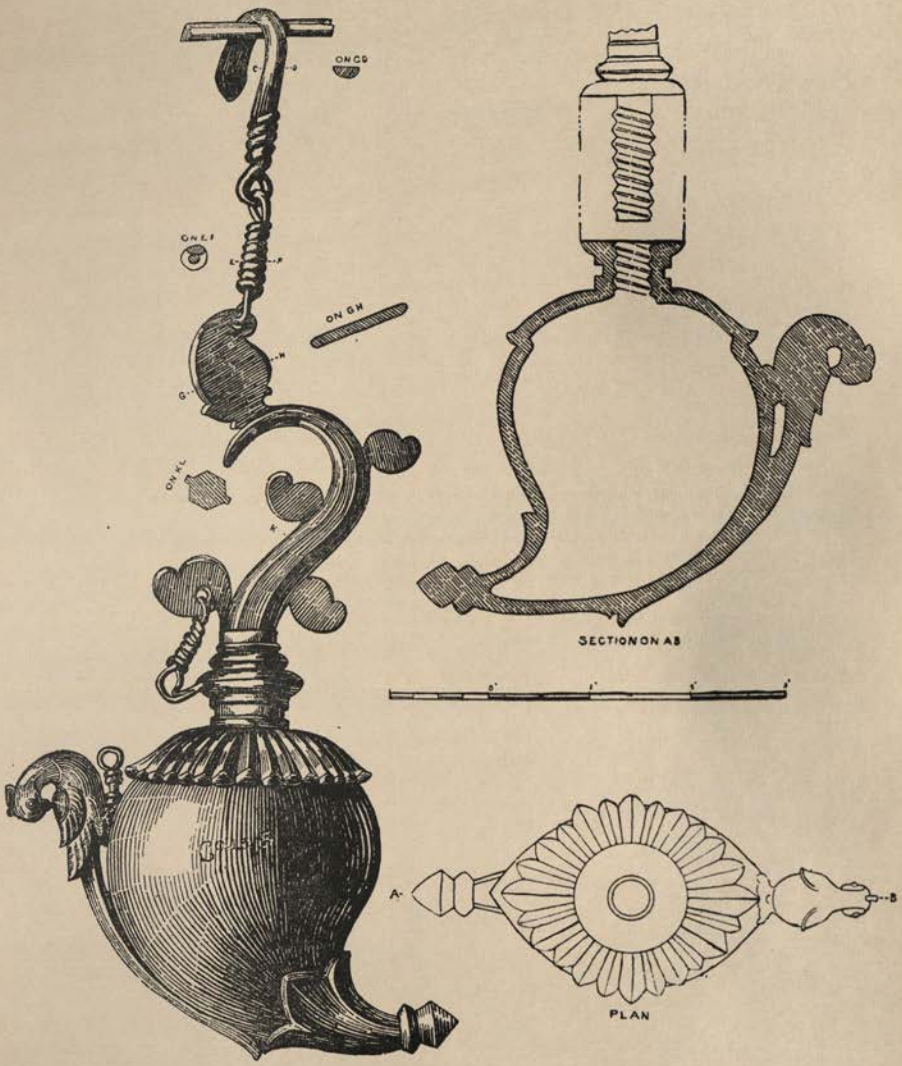


Fig. 154

Fig. 154.

This hollow mango-shaped brass vessel is said to be used by pilgrims for keeping holy water.

It is called "Charanamrita" or "feet nectar."

The specimen is in the Government Museum.

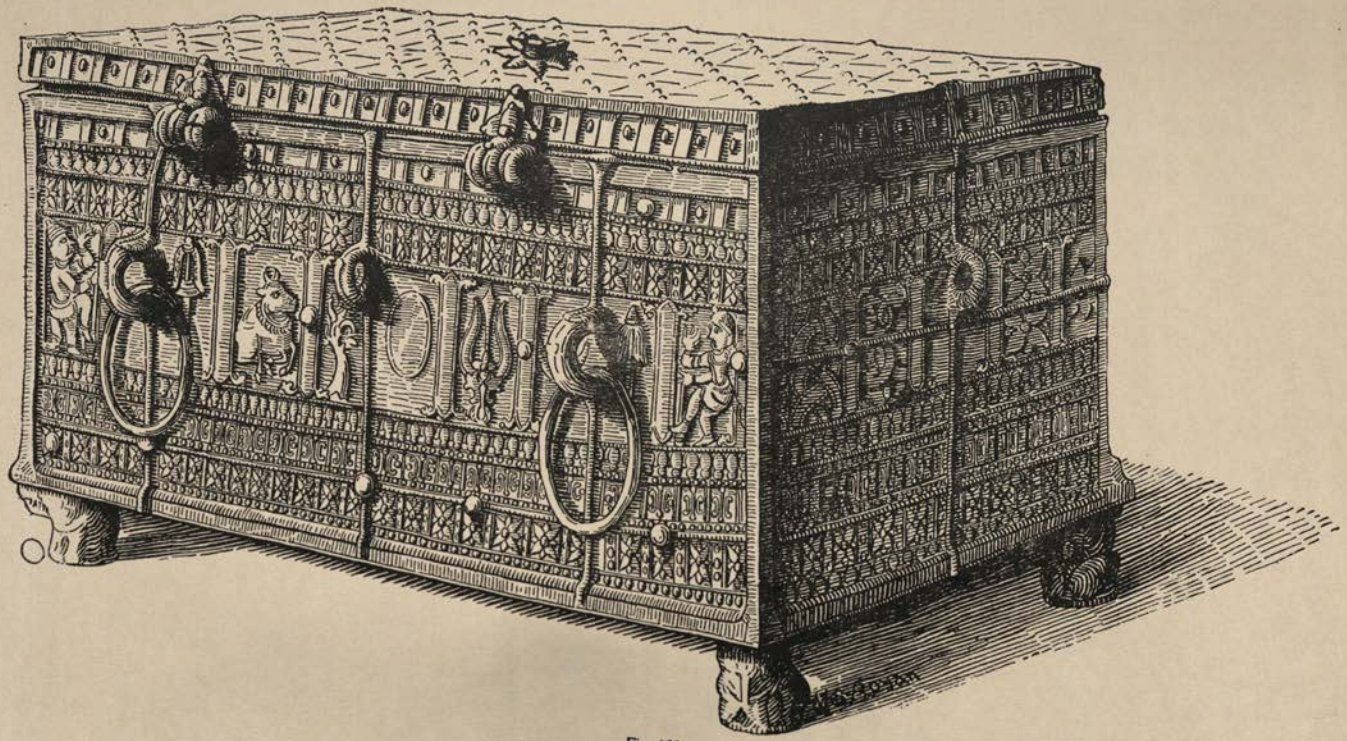


Fig. 155.

Fig. 155.

A cast copper treasure chest. This chest was found burried in the temple of Tiruvelangadu in the North Arcot District, in 1909.

When found, it contained a number of jewels used for adorning the temple idols.

It is a remarkably fine example of cast metal-work, being decorated, not only on all sides but on the top and bottom also.

It is supported on four lions.

The sides are decorated in bands of rosettes and other ornamental forms, religious emblems, and figures of man and beasts. There are large rings on the front and back to act as handles.

The decoration shews a fine sense of spacing and the great value of the repetition of conventional ornamental units.

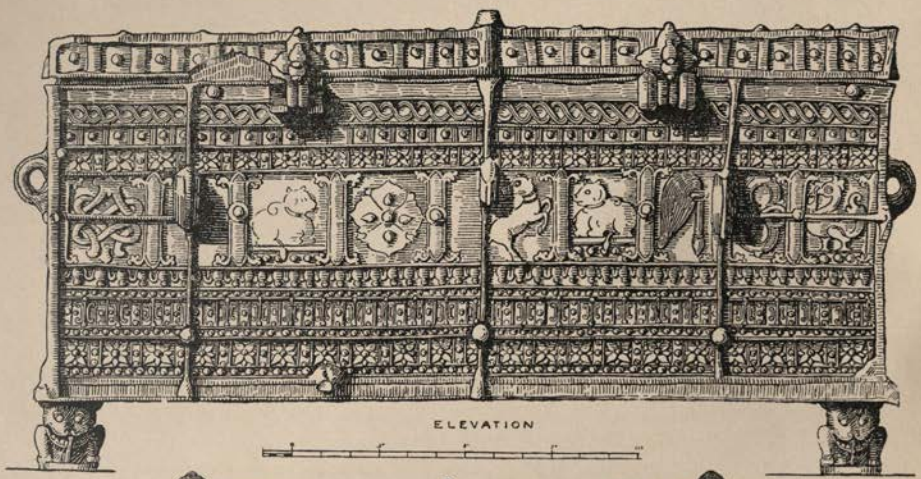
The lid and bottom are covered with diaper patterns.

The many ribs and bosses, and the pattern so arranged in straight bands, give a look of security and strength to the chest, eminently suitable to its use.

The decoration, though not absolutely symmetrical, is very finely and evenly balanced.

It was probably made not earlier than the latter part of the Seventeenth or early in the Eighteenth Century.

It is in the Government Museum.



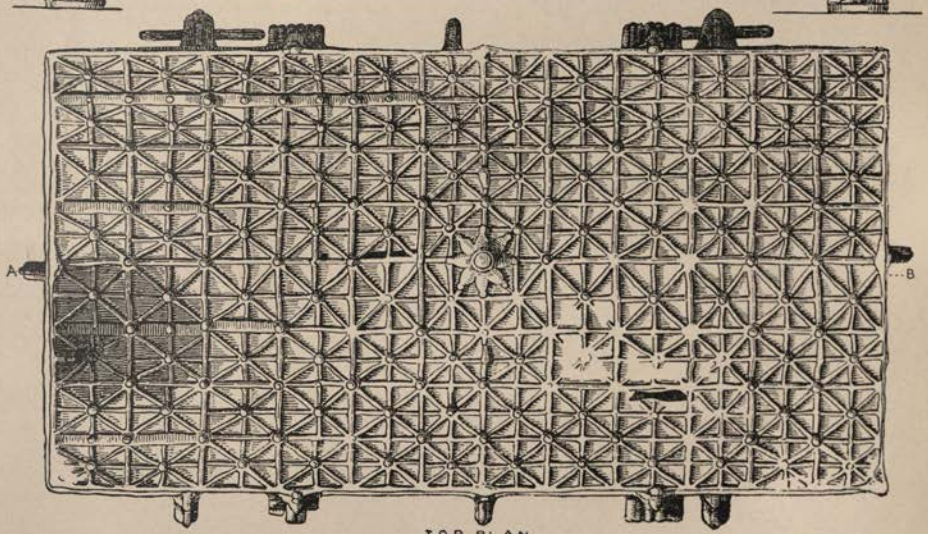
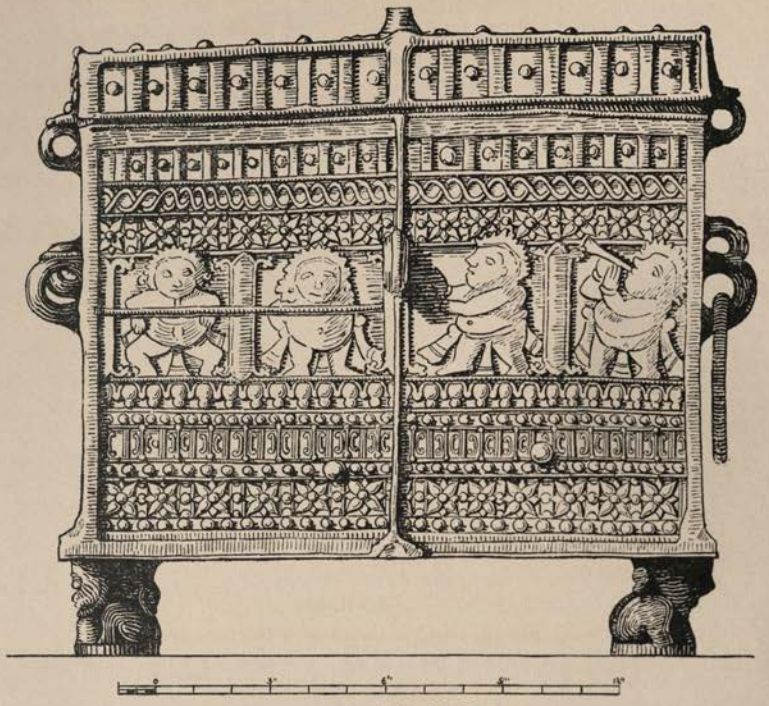


Fig. 155-A.

Fig. 155-A.

The drawing shews the top, and the front side of the preceding chest.

The various symbols on the main band of ornament are the bull, stag, trident and others belonging to Shiva.



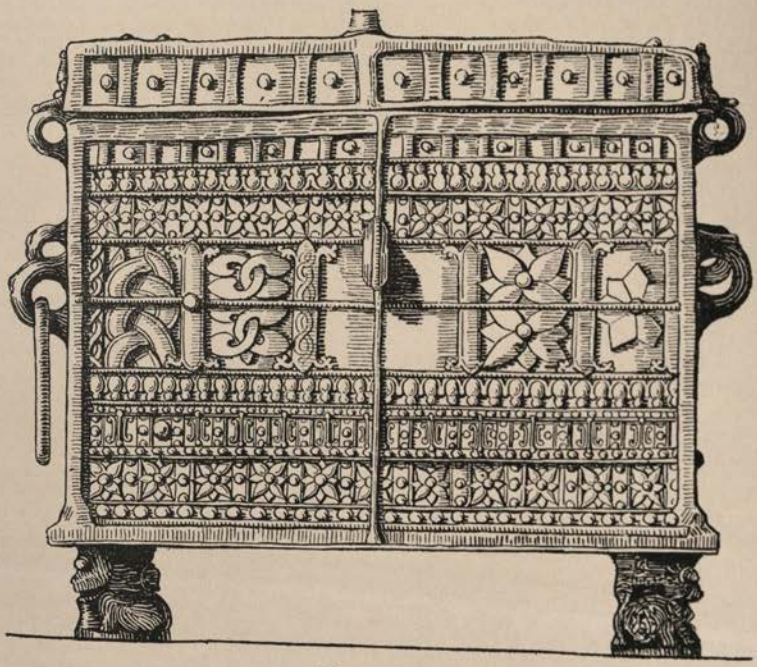
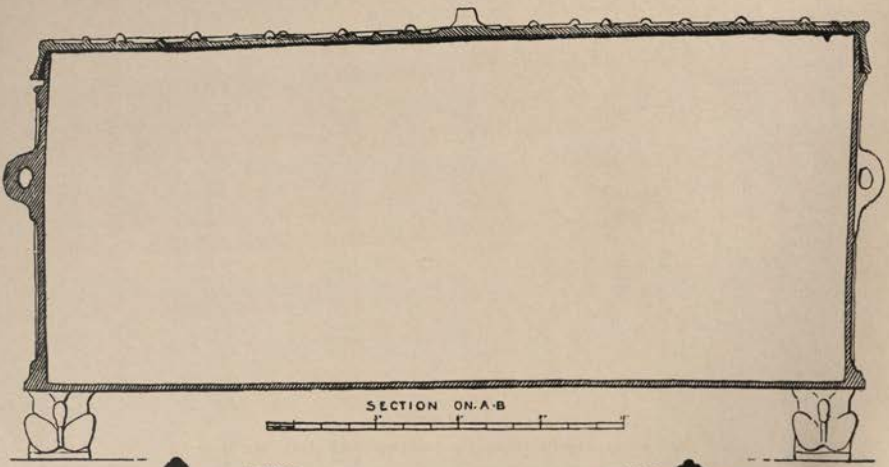


Fig. 155-B.

Fig. 155-B.

These drawings shew the two ends of the chest figure 155.



BOTTOM PLAN

Fig. 155-c.

Fig. 155-C.

The drawings shew the section and the bottom plan of the chest figure 155.

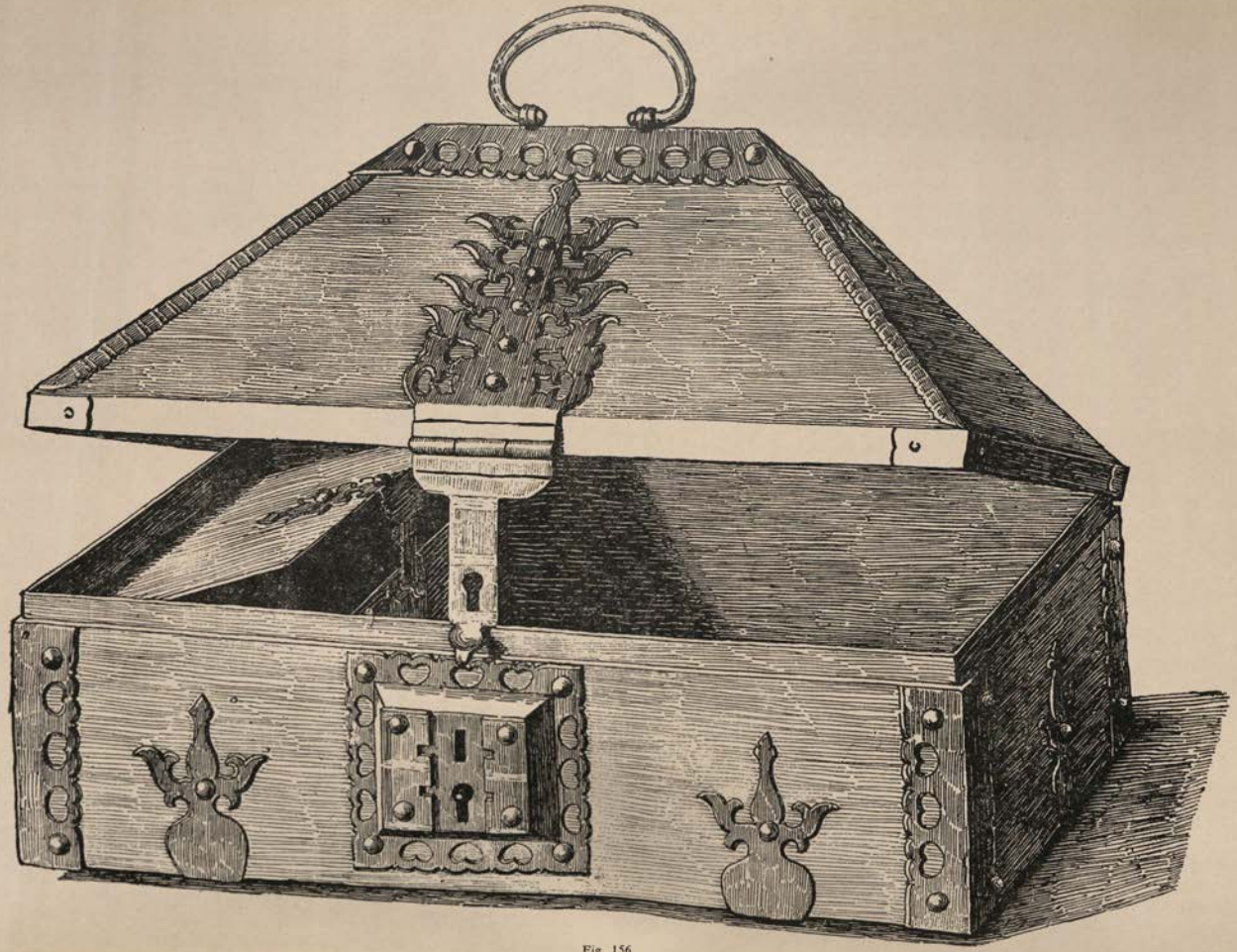


Fig. 156

Fig. 156.

A brass betel-leaf and jewel box.

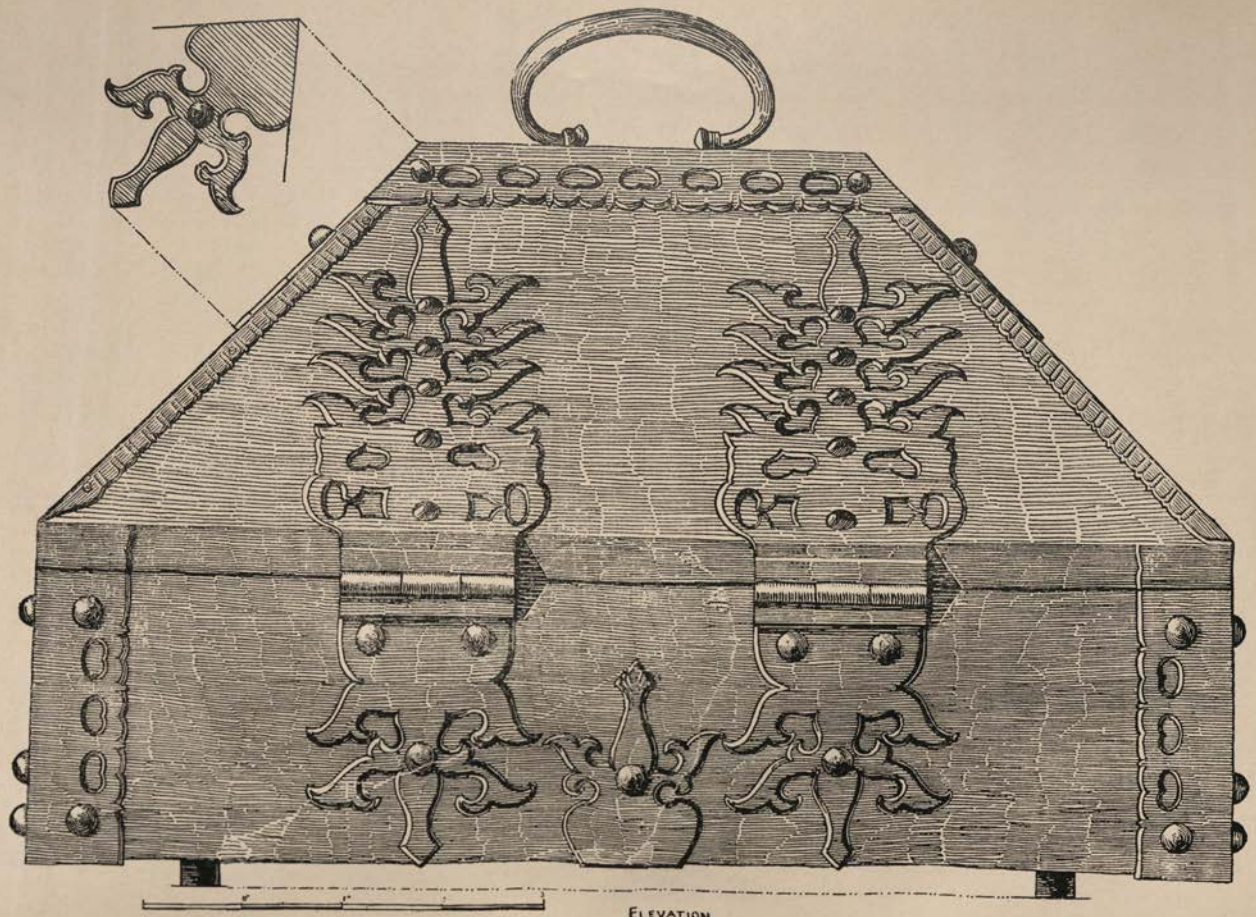
The sides and top are made of carefully fitted brass sheets and the hinges and other ornamental portions are sometimes wrought and sometimes cast. The form seems to be common only in Malabar and is probably derived from the familiar reliquary of Europe, which roughly represents a Church, in its general outlines. There are numerous specimens to be found in European Museums of boxes approximating very closely to this form. Indeed there are two in the South Kensington Museum—one, a Spanish box of the twelfth century, and the other of French Fourteenth Century workmanship, either of which might have been used as a model for this particular specimen. In the French example not only the form mentioned, but fittings also, particularly the fastening, is made on exactly the same principle with a hinged hasp and protruding lock, ornamented along the edges.

The particular example (figure 156) is wholly of brass, but a more common form is of red lacquered and painted wood with brass mounts. Occasionally specimens may be seen in use but these boxes are rapidly being discarded for the smaller and more convenient oval or rectangular shaped boxes common in every brass bazaar.

The form of the brass hasp plate and hinges probably originally represented a sacred tree with an animal on either side of the trunk. On some examples this is quite obvious.

The protruding lock and hinged hasp, though an extremely common form throughout South India and Ceylon, is no doubt a legacy from the early European traders.

This example is owned privately.

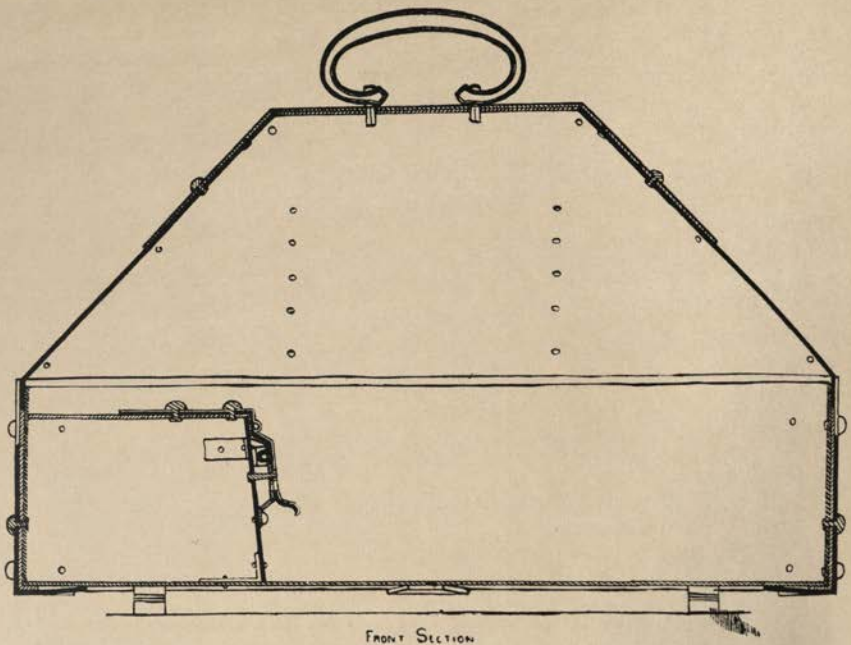


ELEVATION

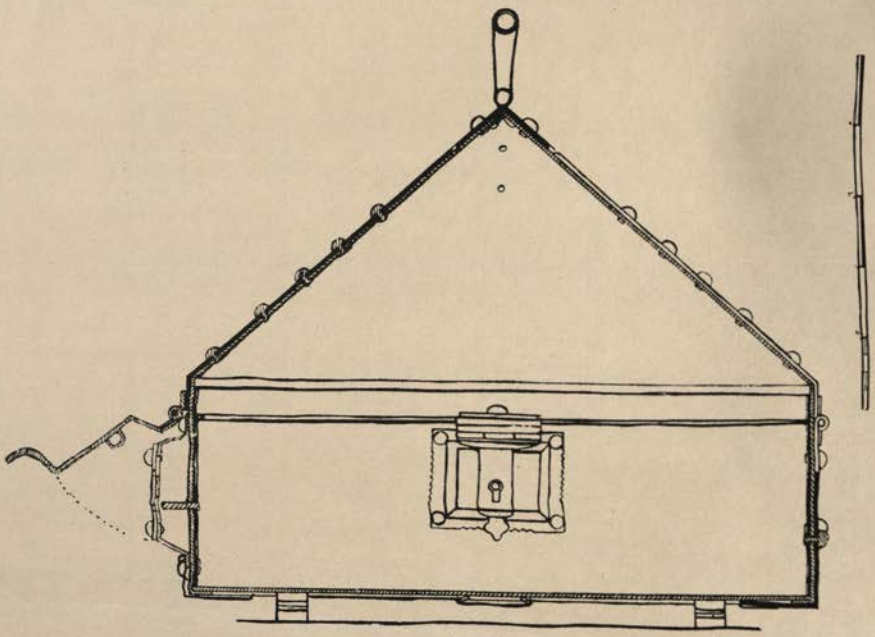
Fig. 156 A.

Fig. 156-A.

The back elevation of the preceding box is here shewn.



Front Section



Side Section

Fig. 156 a

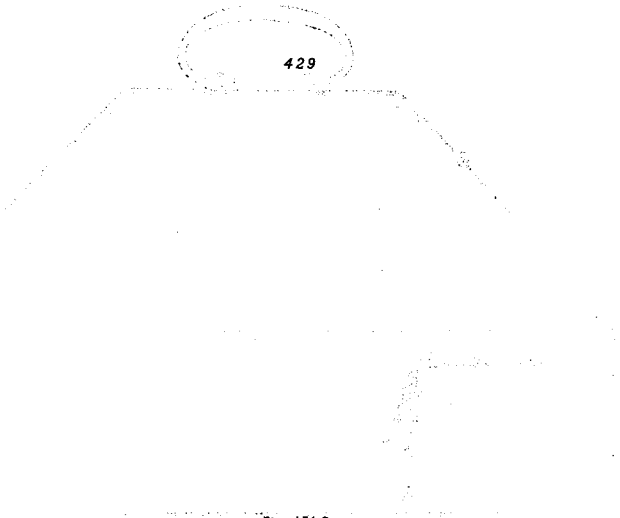
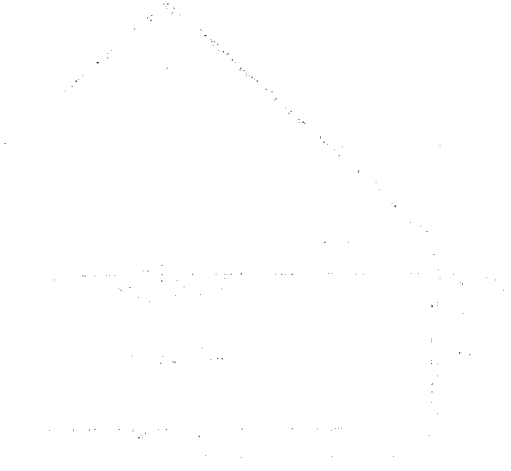
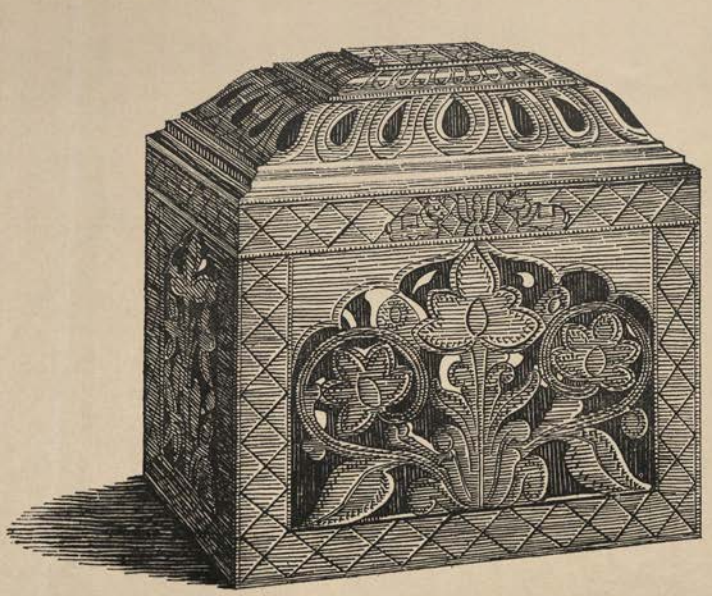
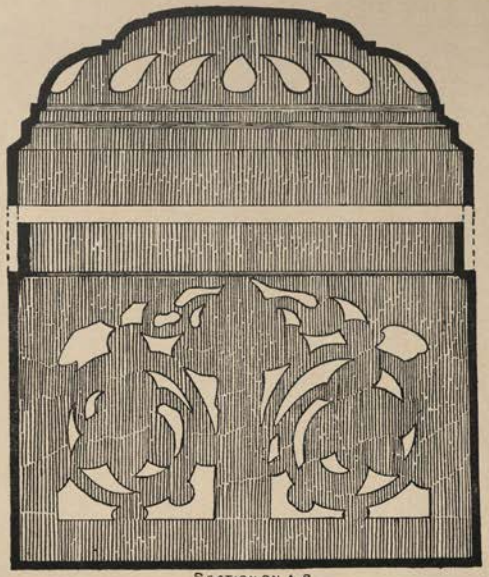


Fig. 156-B.

The front and side sections of the box, figure 156, are shewn in these drawings.



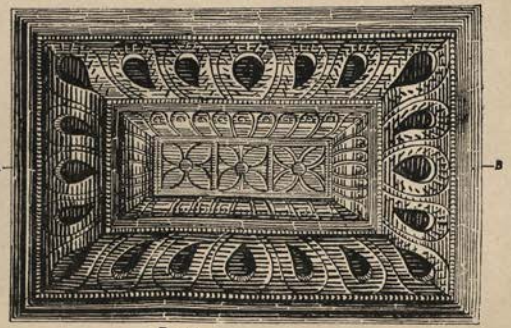




SECTION ON A B

DETAILS OF SIDES

DETAILS OF BACK



PLAN

Fig. 157.

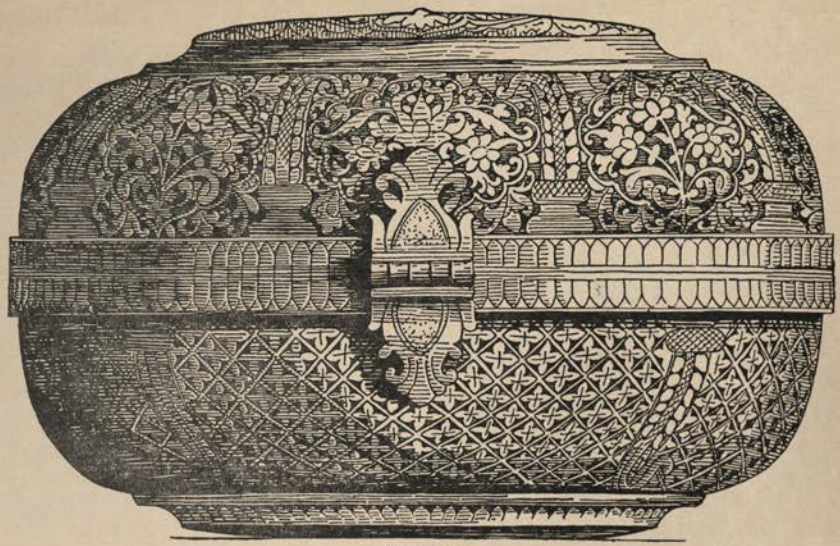
Fig. 157.

This pierced brass box is simple, though effective, in design.

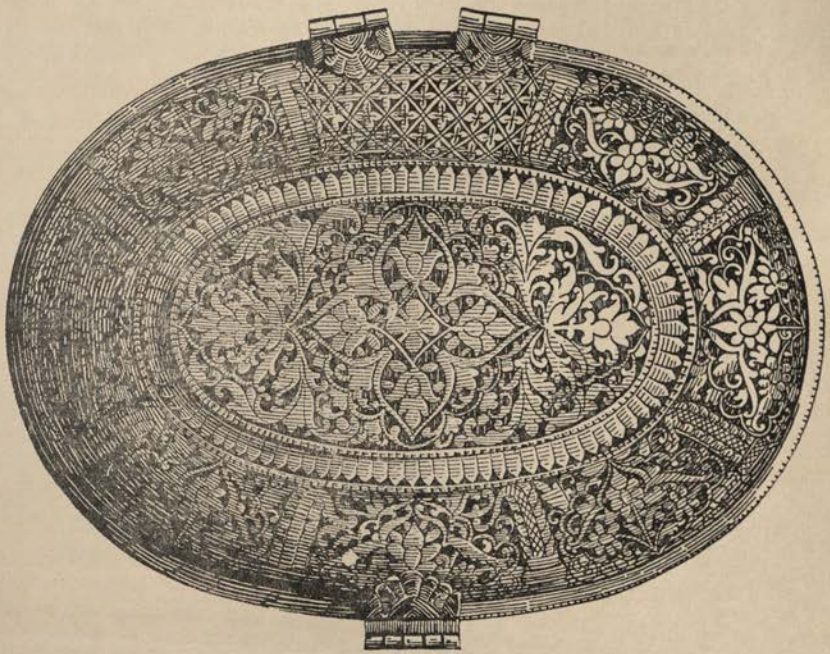
Its exact use is difficult to determine, but probably it was intended for some sort of perfumes.

On the front side, at the top, are two bulls, on either side of an ornament which may be intended for a trident, or a lingam. These are probably only a mark to indicate that the owner was a Saivite.

The specimen is in the Government Museum.



ELEVATION



PLAN

Fig. 158.

Fig. 158.

This delicately worked brass box is a form common in the Vizagapatam district.

The arabesque pattern on this specimen shews decided Mussalman influence, but the same form with other decoration is more common.

The specimen is in the Government Museum.

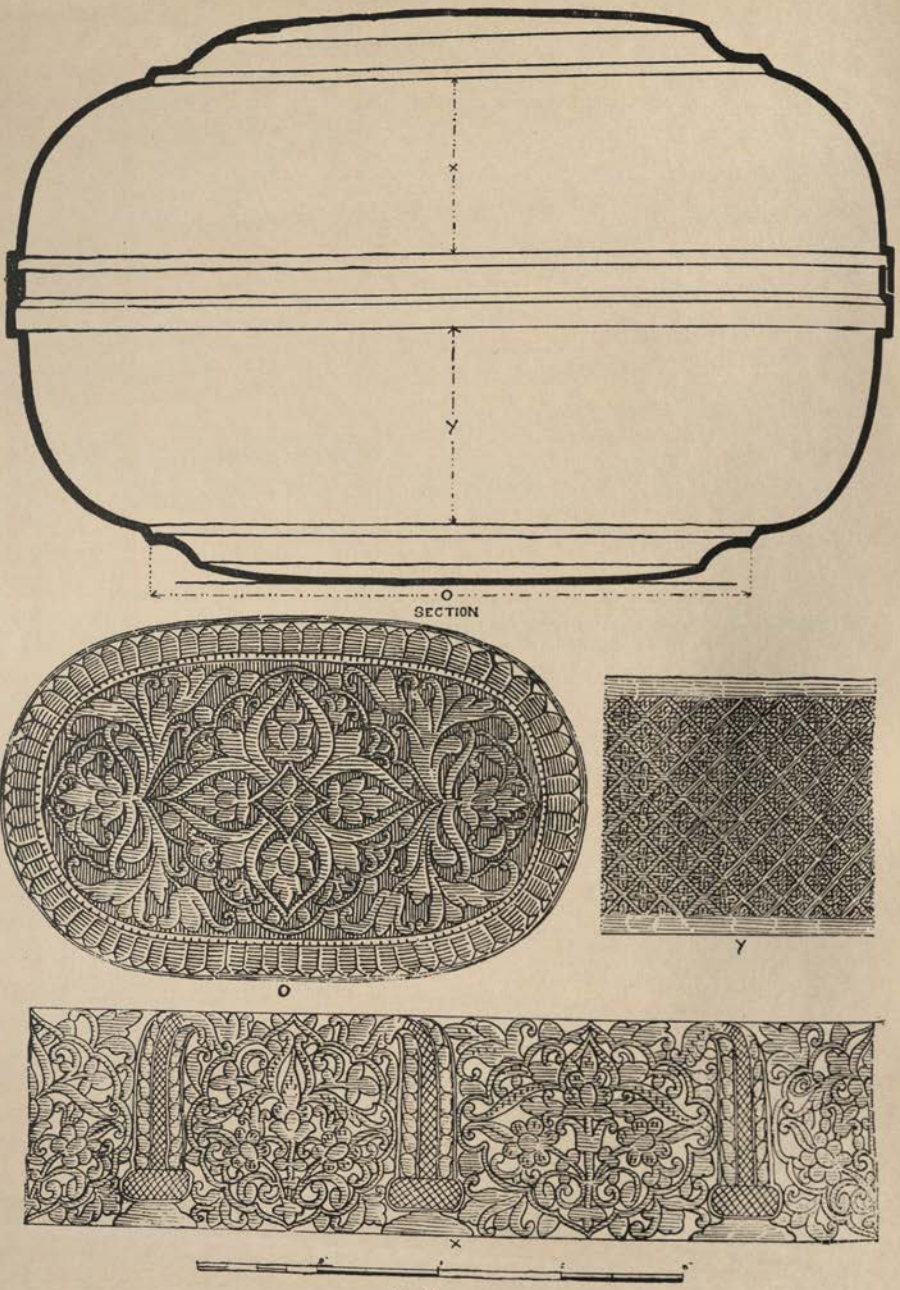


Fig. 158 A.

Fig. 158-A.
Some of the details and the section of the preceding box are here shewn.

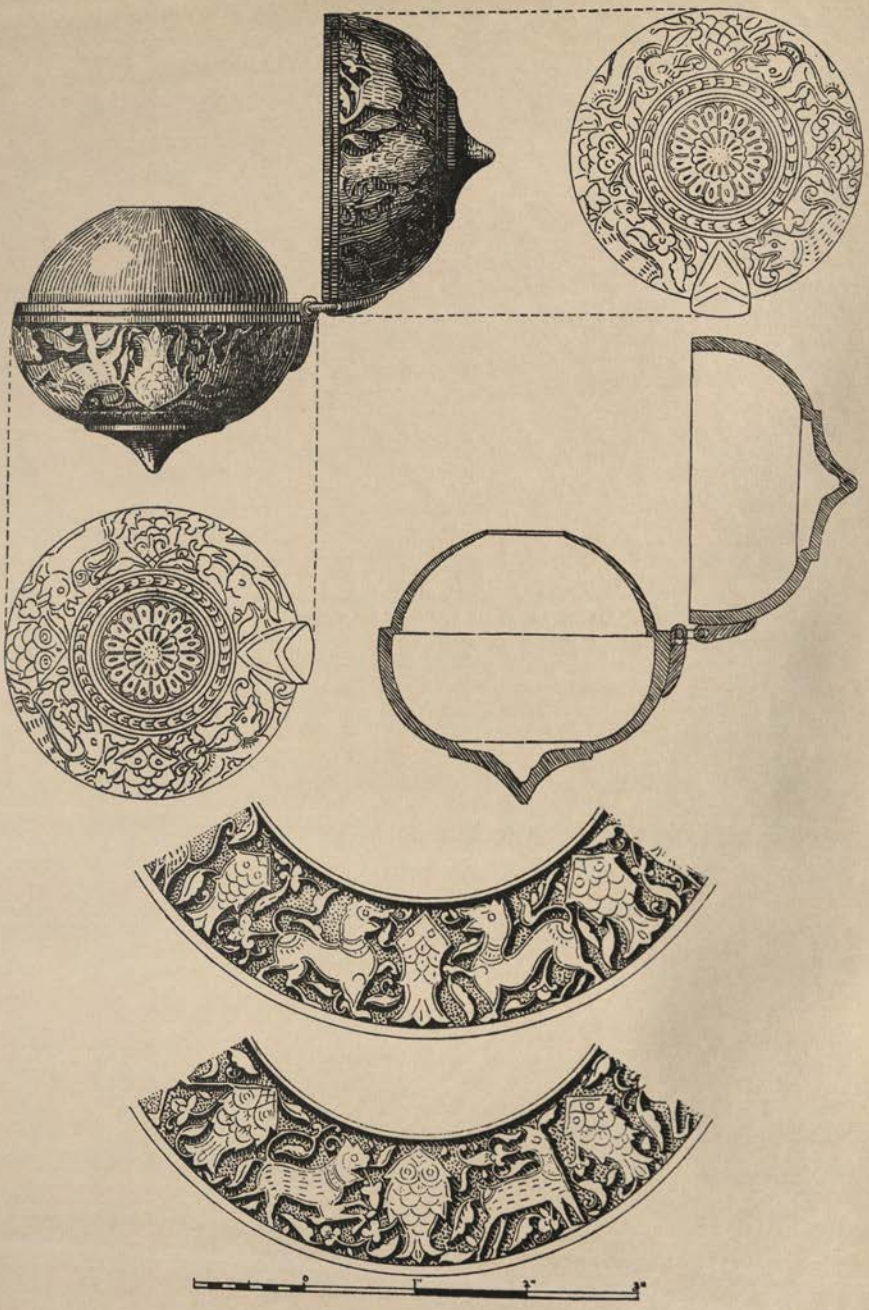


Fig. 159.

Fig. 159.

This chunam box is a form common in Ceylon, and farther East. In the Malay tobacco boxes called "chelpa" the same form is used.

They often have an ingenious arrangement, whereby they remain closed by their own weight when hanging by a chain from the waist.

It is in the Government Museum.

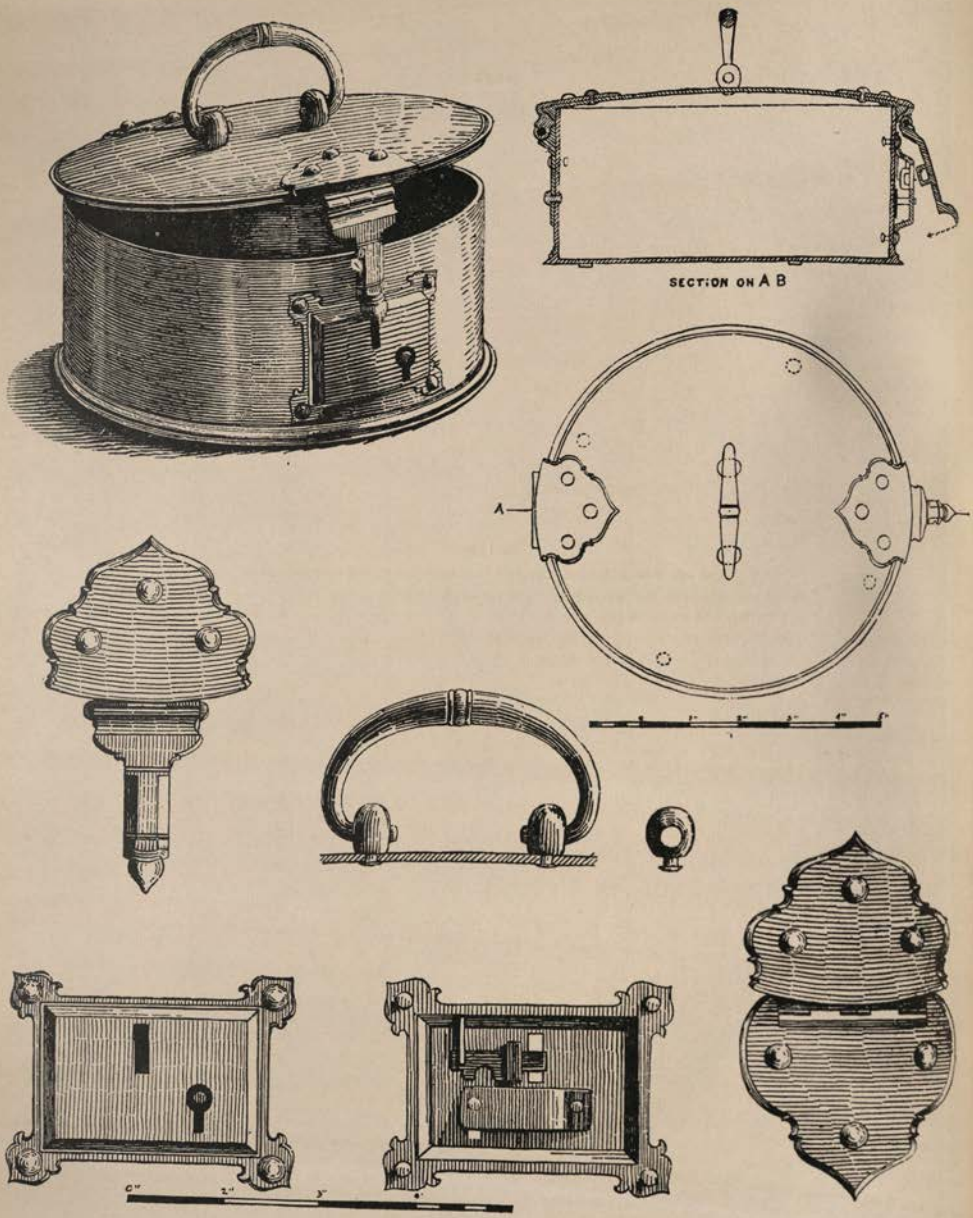


Fig. 160.

Fig. 160.

This simple brass betel box is an excellent specimen of plain workmanship.

All the parts are cast of fairly thick metal, the only ornament being in the design of the lock, hasp and hinges.

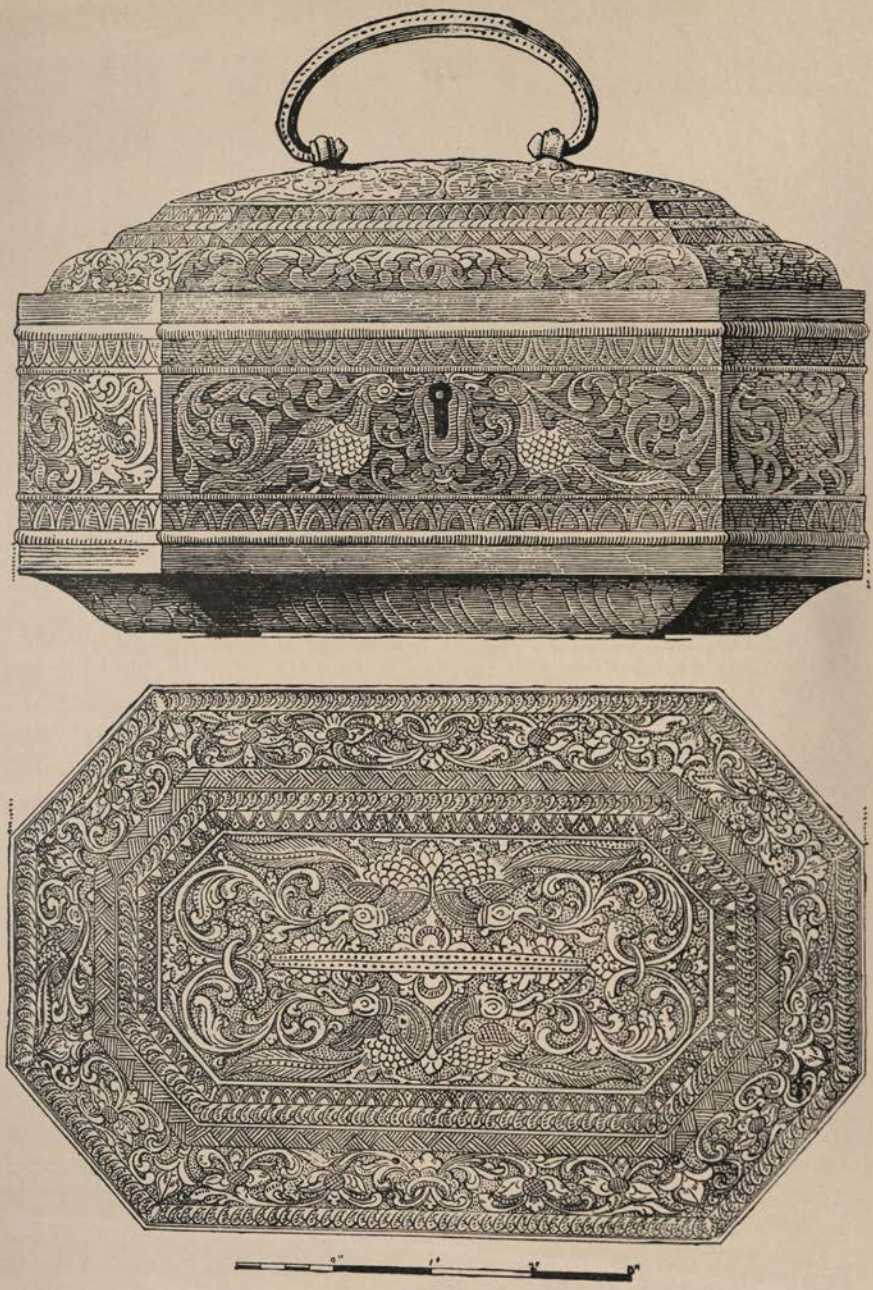


Fig. 161

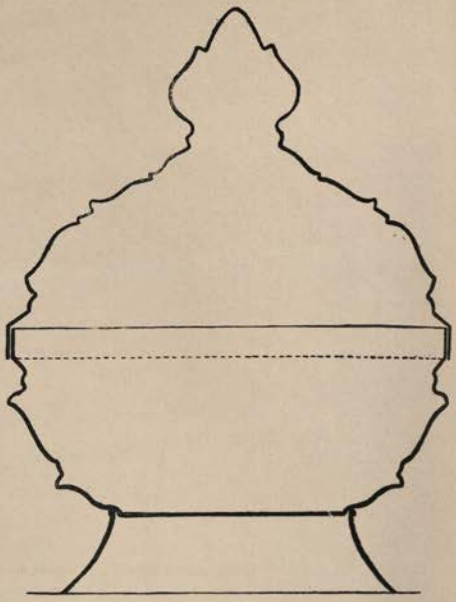
Fig. 161.

This hammered brass betel box is in strong contrast to the one figured on the preceding plate.

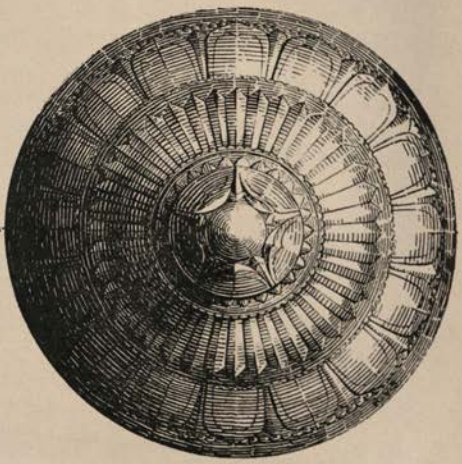
In this example, which is octagonal in form, every part is covered with a fine pattern of bird forms and scrolls.

The drawings shew the front elevation and top plan.

It is a very typical specimen of South Indian repousse work.



SECTION ON AB



PLAN

Fig. 162.

Fig. 162.

This copper box from the Government Museum is probably intended for incense. The details suggest an elaborated lotus pattern with a bud at the top.

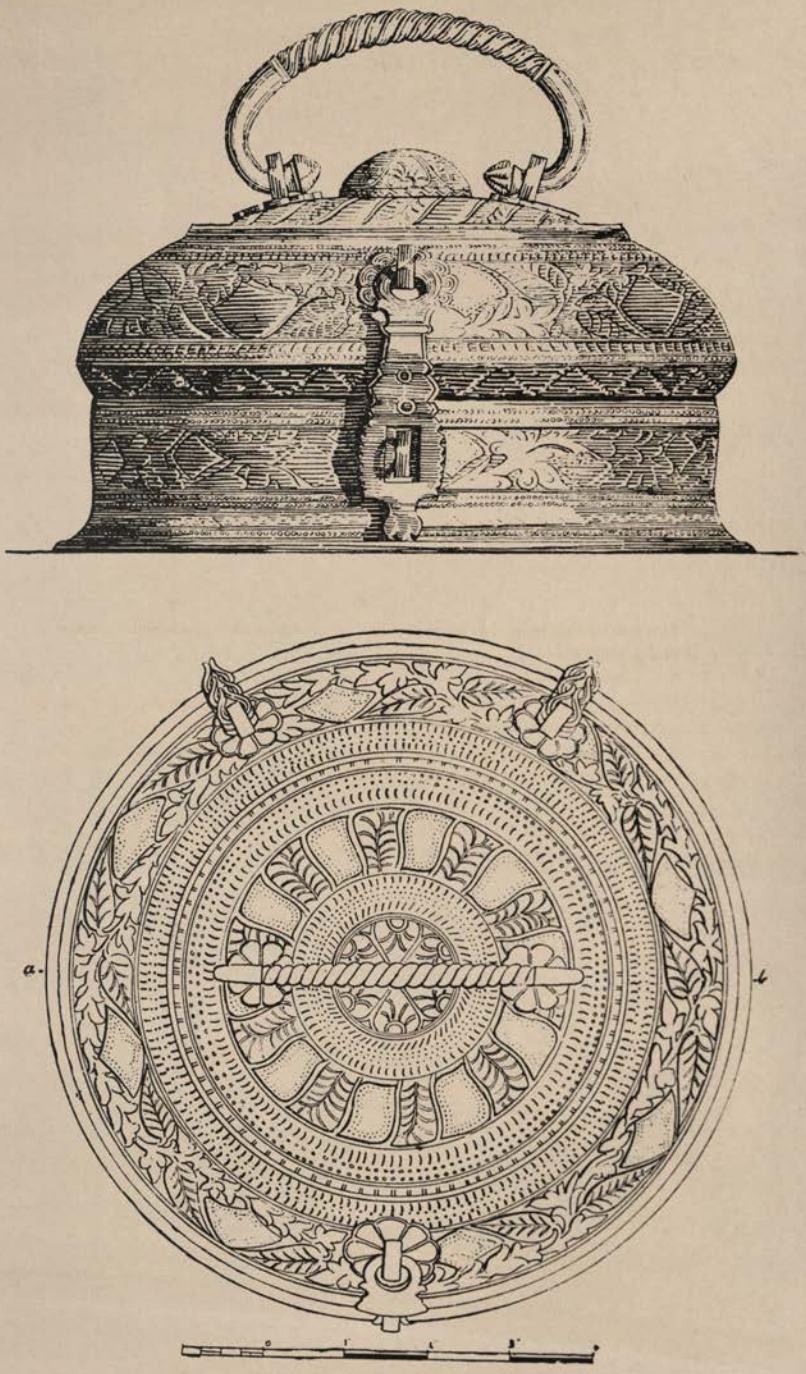


Fig. 163.

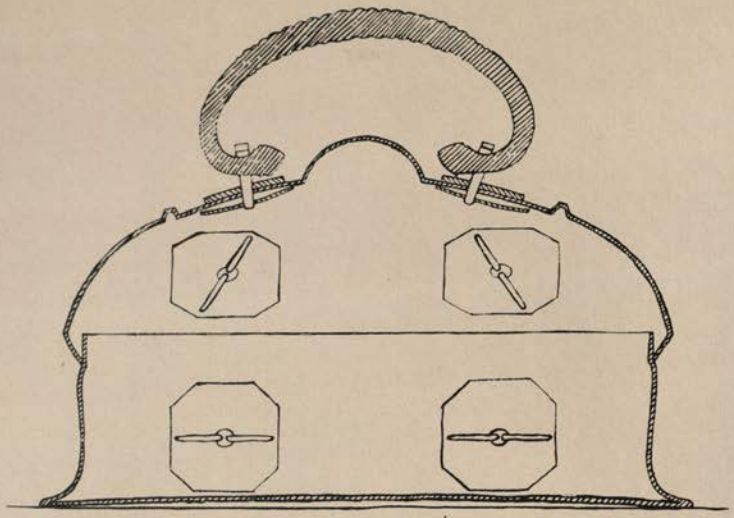
Fig. 163.

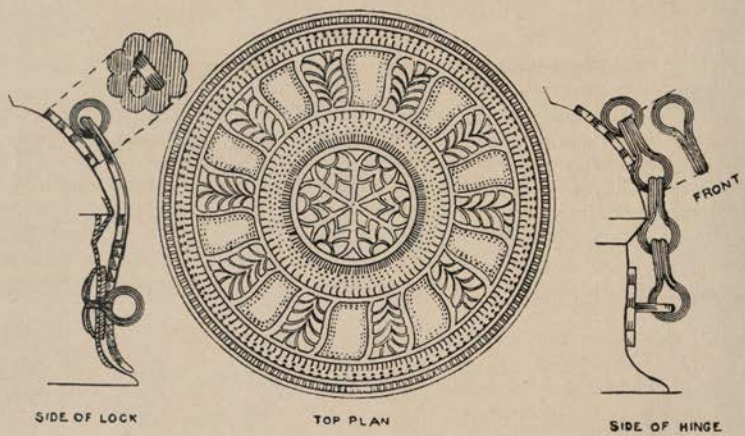
This and the following two examples are forms of betel or spice boxes in common use among Musalmans.

This example is of brass, with a handle at the top of the lid.

The chains, which take the place of hinges, are a very old European form, found on boxes as early as the fifth century.

It may be noticed that the various parts of the box are fastened together by bending or hammering and that no solder is used.





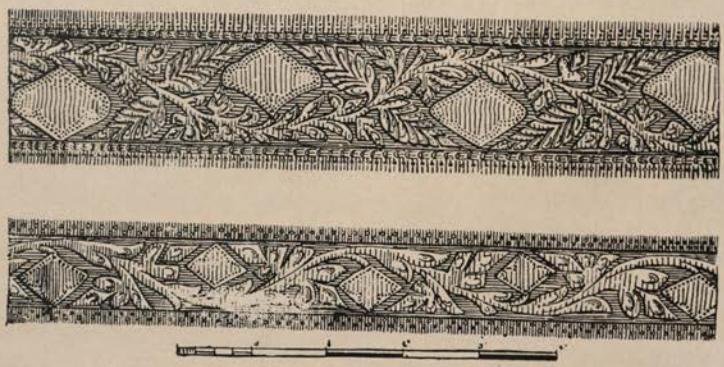


Fig. 163-A.

Fig. 163-A.

This shews the section, plan and details of the preceding box.

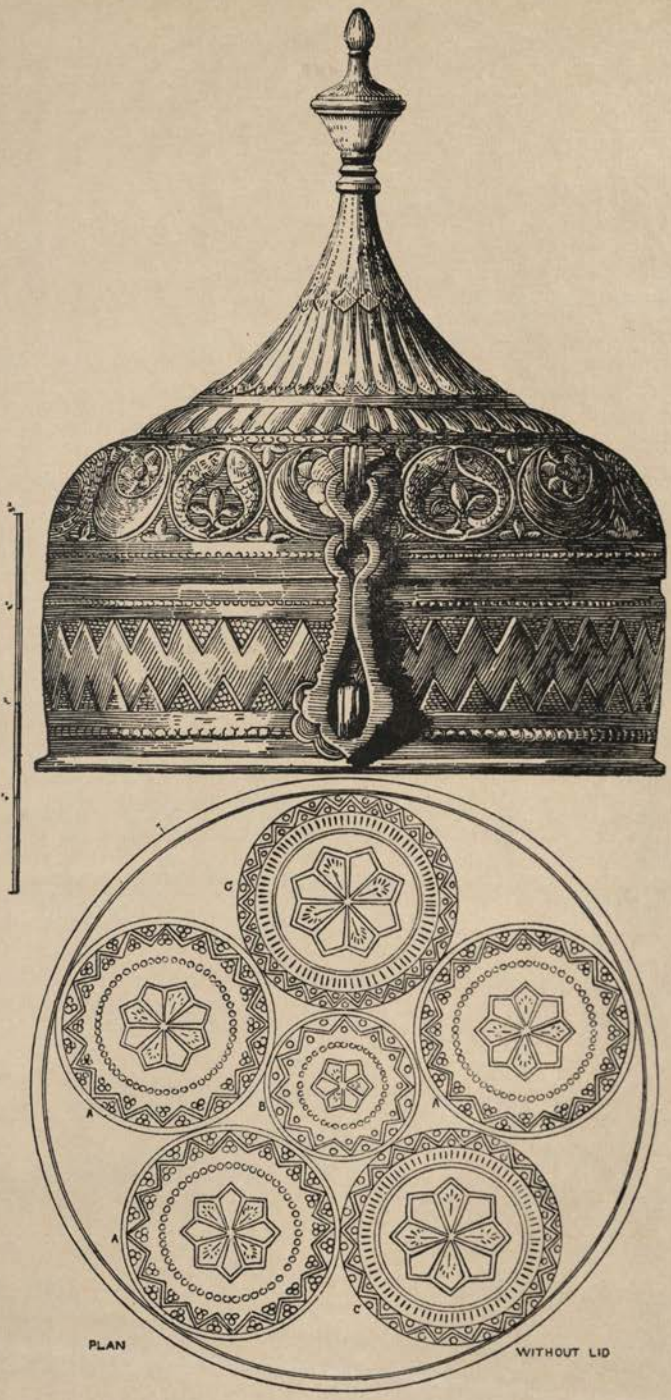


Fig. 164.

Fig. 164.

The box here shewn probably originated in form from the common round and pointed helmet in use by the Mussalman invaders of India.

The crescent decoration is characteristic.

The lower drawing shews the arrangement of the six smaller boxes fitting inside the large one.

The specimen is in the Government Museum.

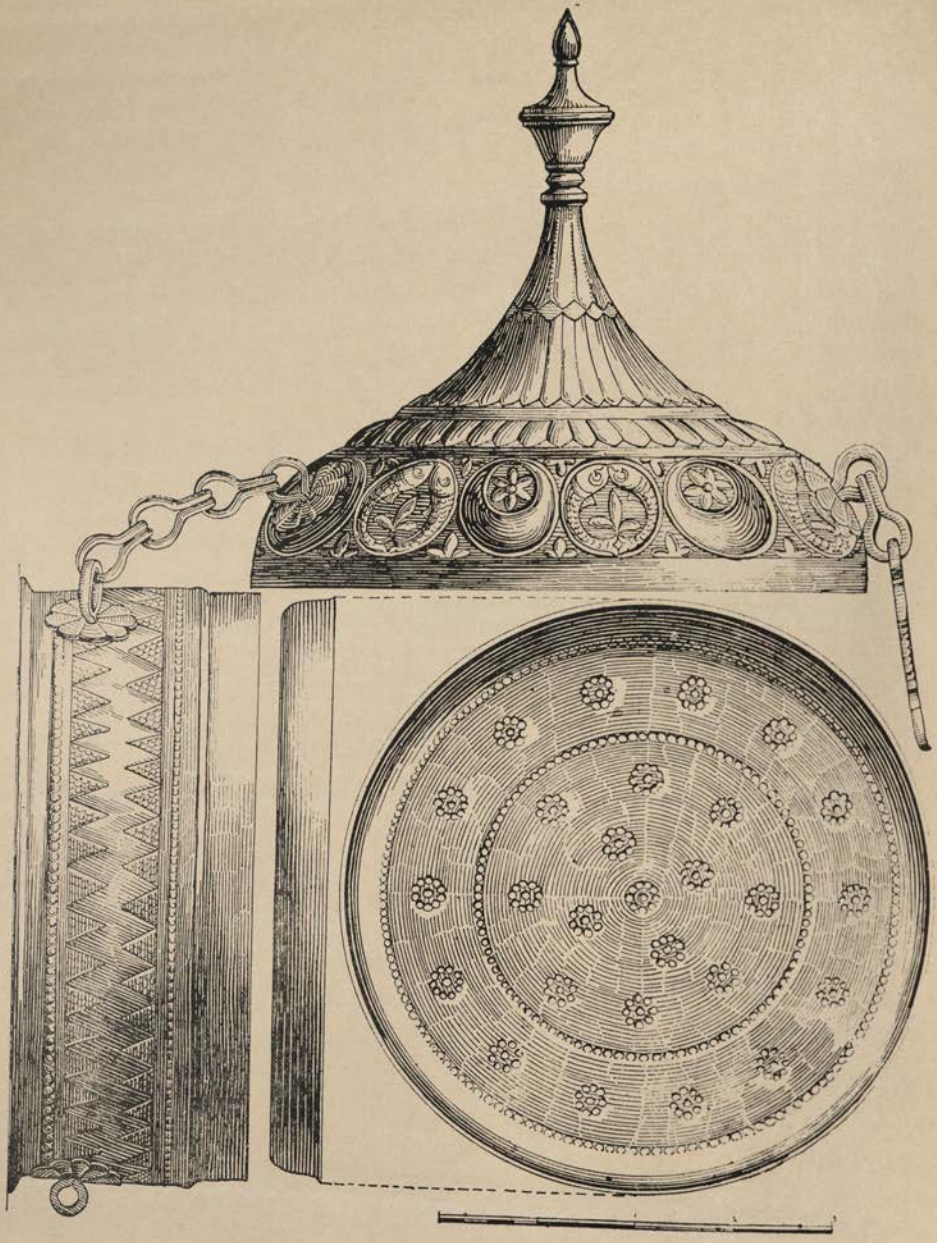
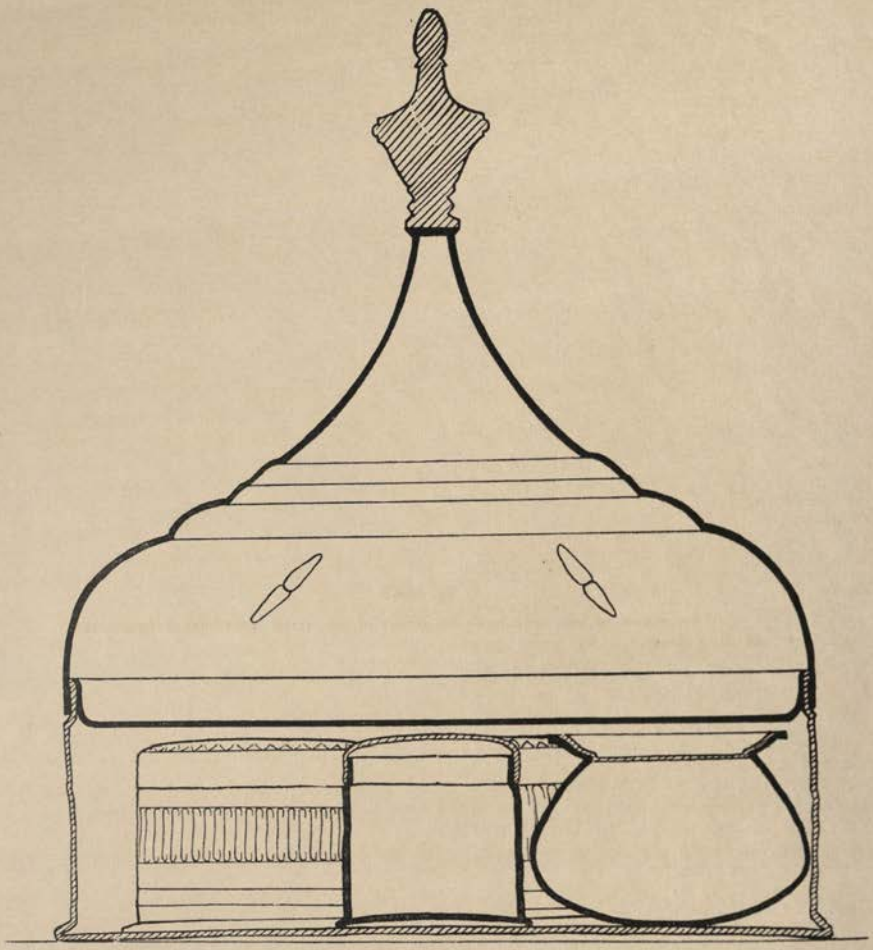


Fig. 164 A.

Fig. 164-A.

The side view, open, and the flat tray which covers the small inside boxes of the preceding example, are shewn in this plate.



SECTION ON X.Y.

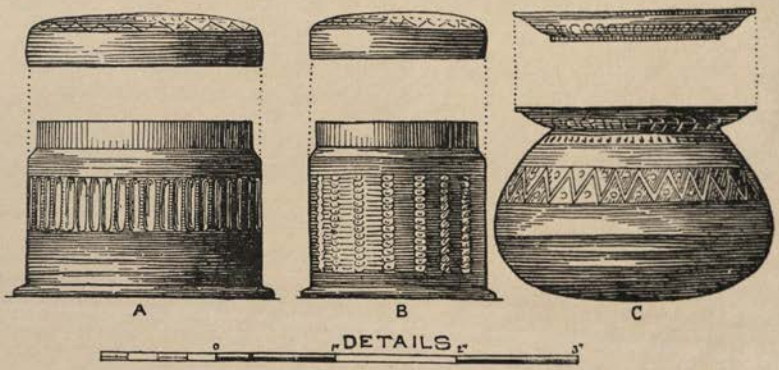


Fig. 164-B

Fig. 164-B.

The section of the large box and details of the small boxes from figure 164 are here shewn.

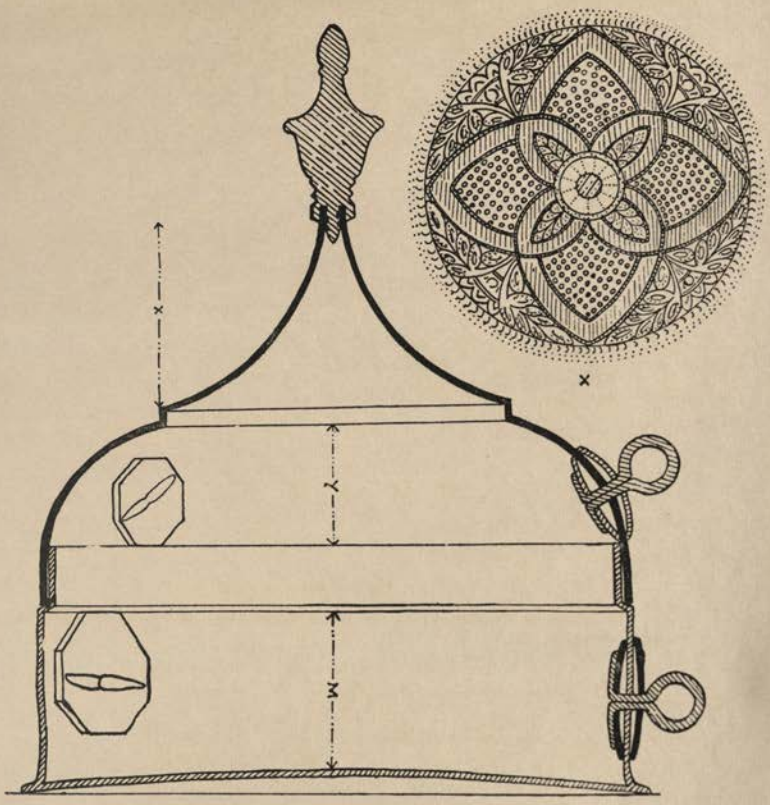
Fig. 165.

Fig. 165.

This second specimen of a spice box is very similar to figure 164, but of more delicate workmanship.

The crescent, again, is the dominant motif of the ornament.

It is in the Government Museum.



SECTION

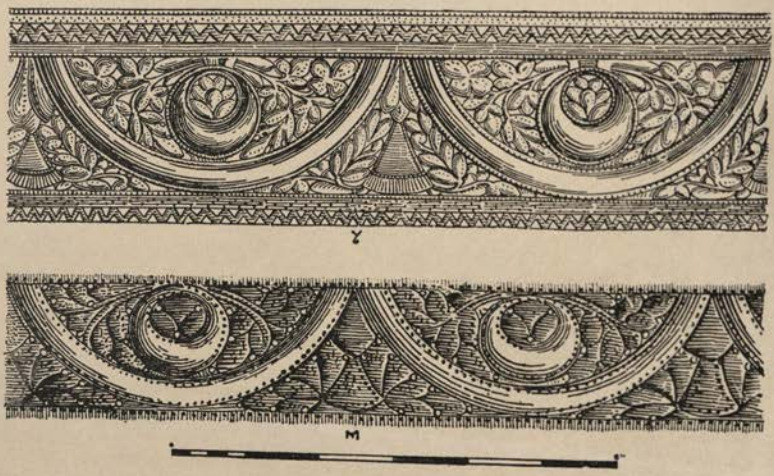


Fig. 165-A.

Fig. 165-A.

The section of the box, figure 165, and some of the details of the pattern are here shewn.

Fig 166.

Fig. 166.

This small box from the Government Museum is intended for face powder.
The tail and head of the small bird on the lid is fitted with holes to receive incense sticks.

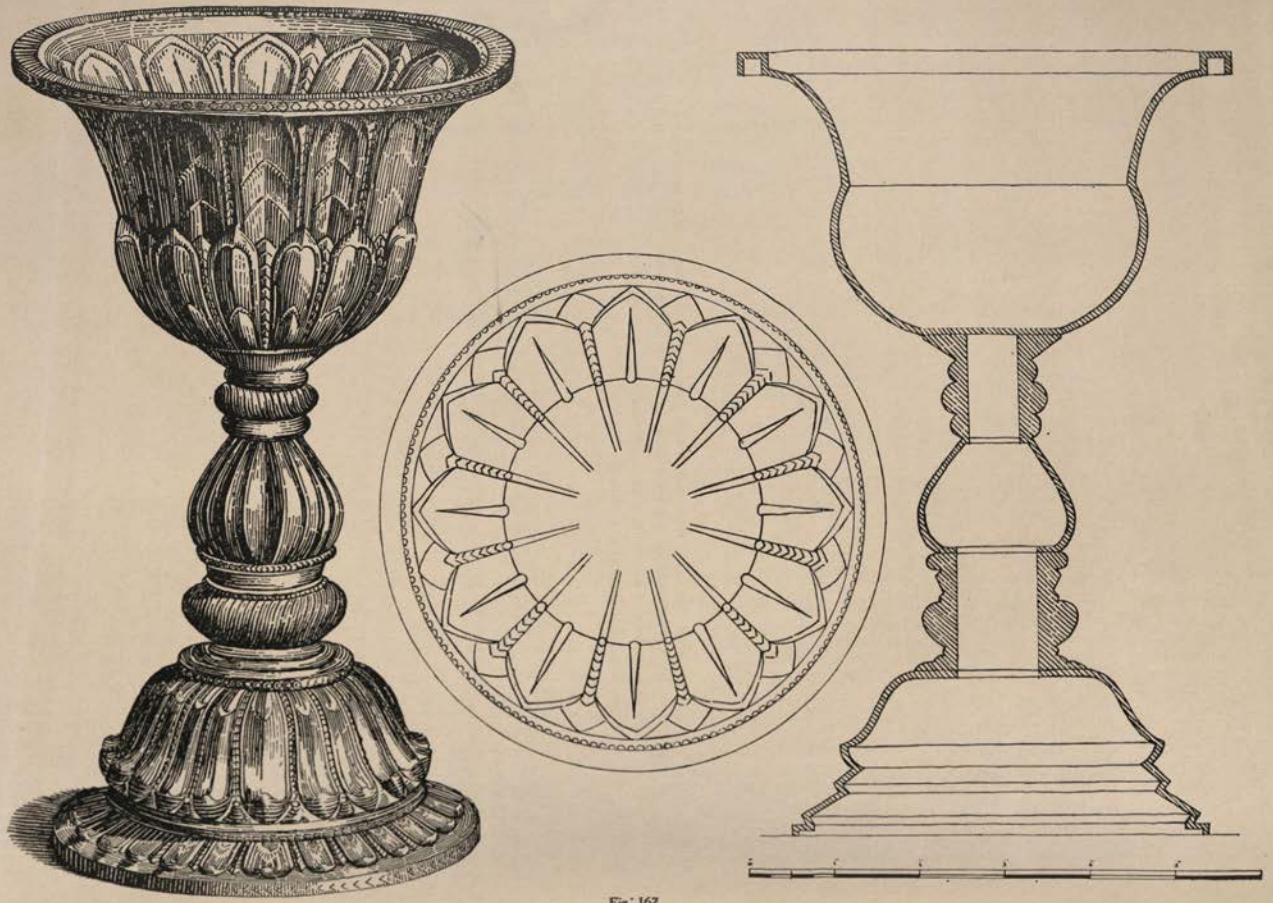


Fig. 167.

Fig. 167.

This brass vase is very similar to the common Indian spittoon, though examples of these latter articles are seldom so elaborately worked.

The pattern of this one is obviously suggested by the lotus.

It is in the Government Museum.

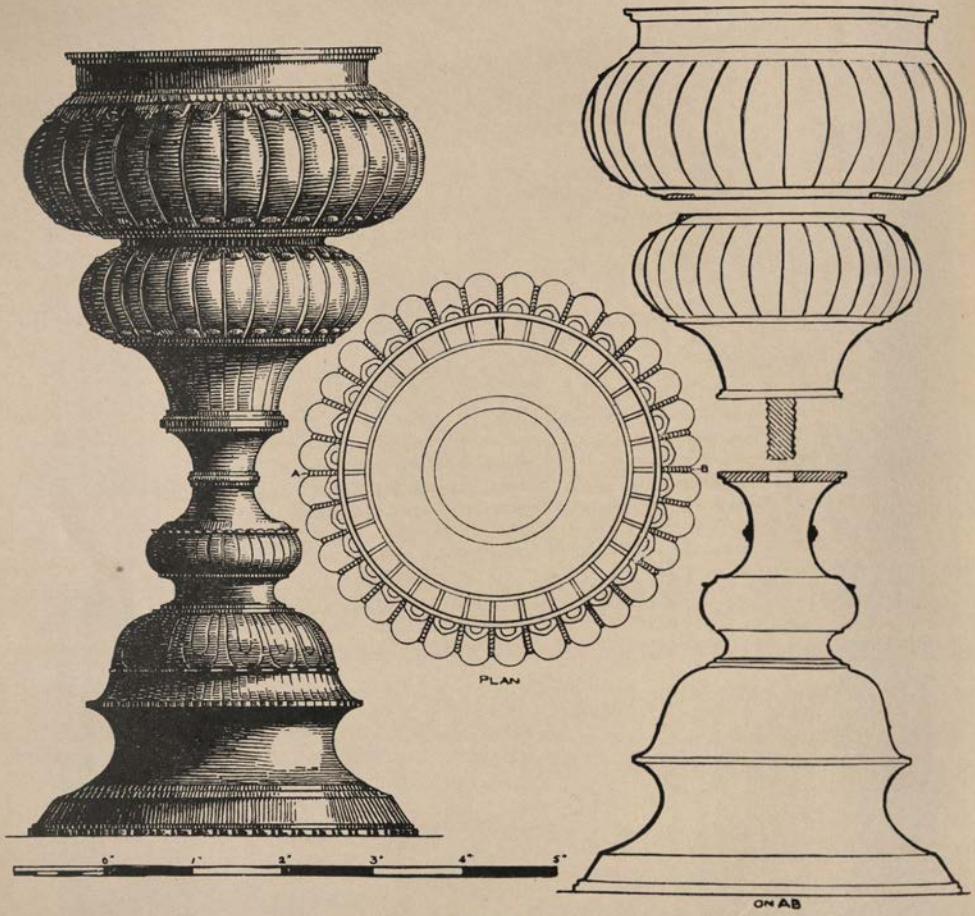


Fig. 168,

Fig. 168.

The vase here figured suggests the beggar's bowl, previously illustrated, in its upper part.

It depends for its ornamental effect on the division of the various parts, and its mouldings, and it is by no means well designed, the separate parts being too nearly equal in their relative proportions and placing.

It is in the Government Museum.

Fig 169.

Fig. 169.

This flat tray, mounted on a stand on wheels, is a rather uncommon form. It is in the Government Museum.

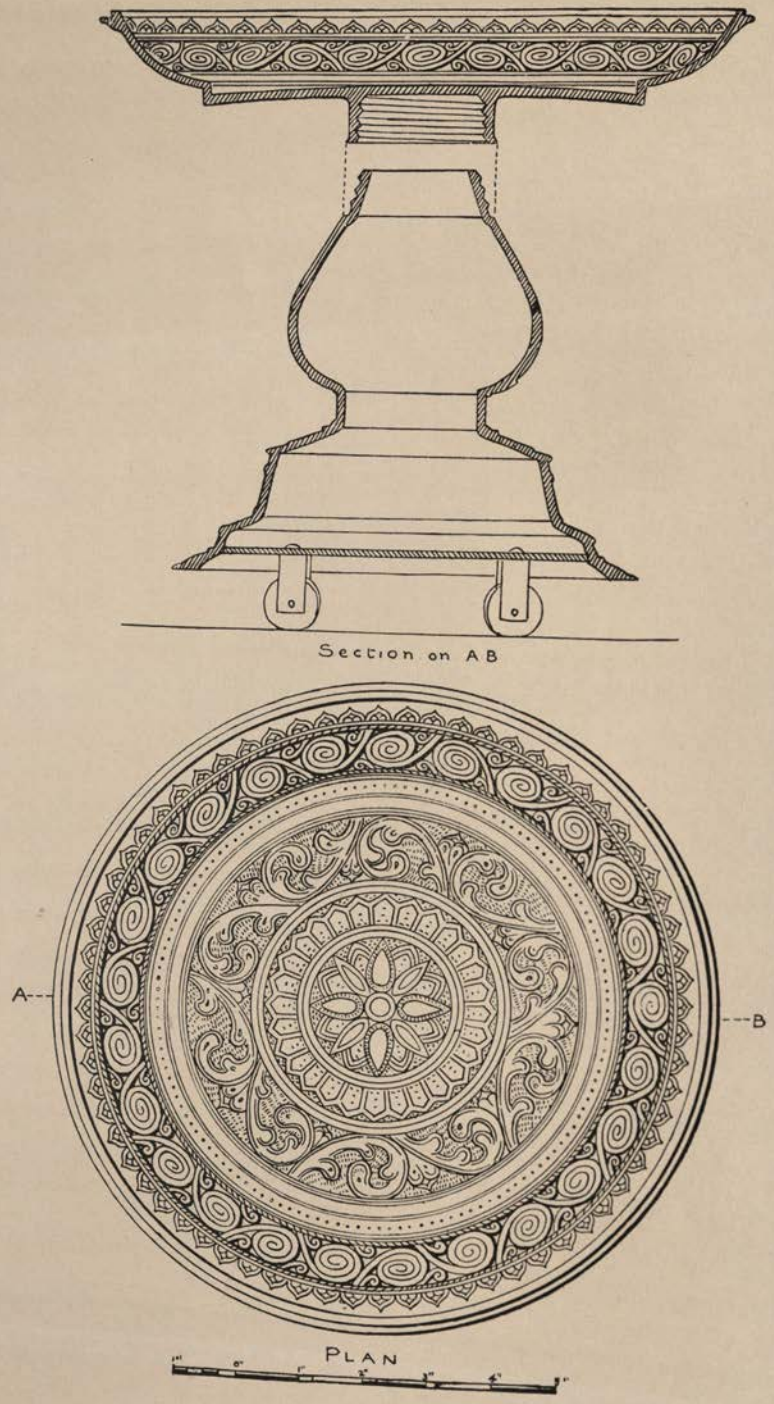


Fig. 169 A

Fig. 169-A.

These drawings shew the plan of the top and the section of the preceding tray.

Fig. 170.

Fig. 170.

This is an elaborate vase of brass with a carefully worked pattern, as usual, founded on the lotus.

The base is somewhat heavy for the upper part.

It is in the Government Museum.

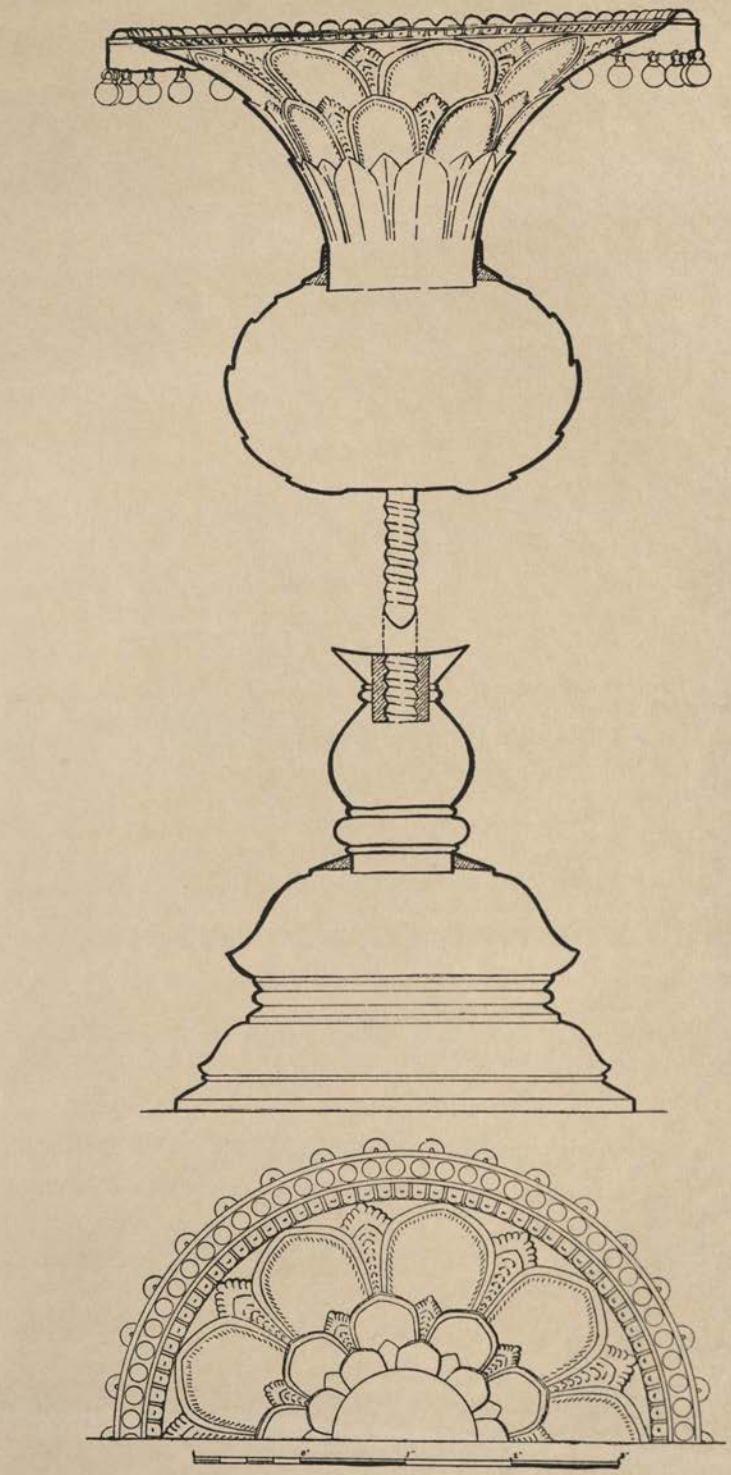


Fig. 170-A.

Fig. 170-A.

The section and plan of the top of the vase figured on the previous plate are here shewn.

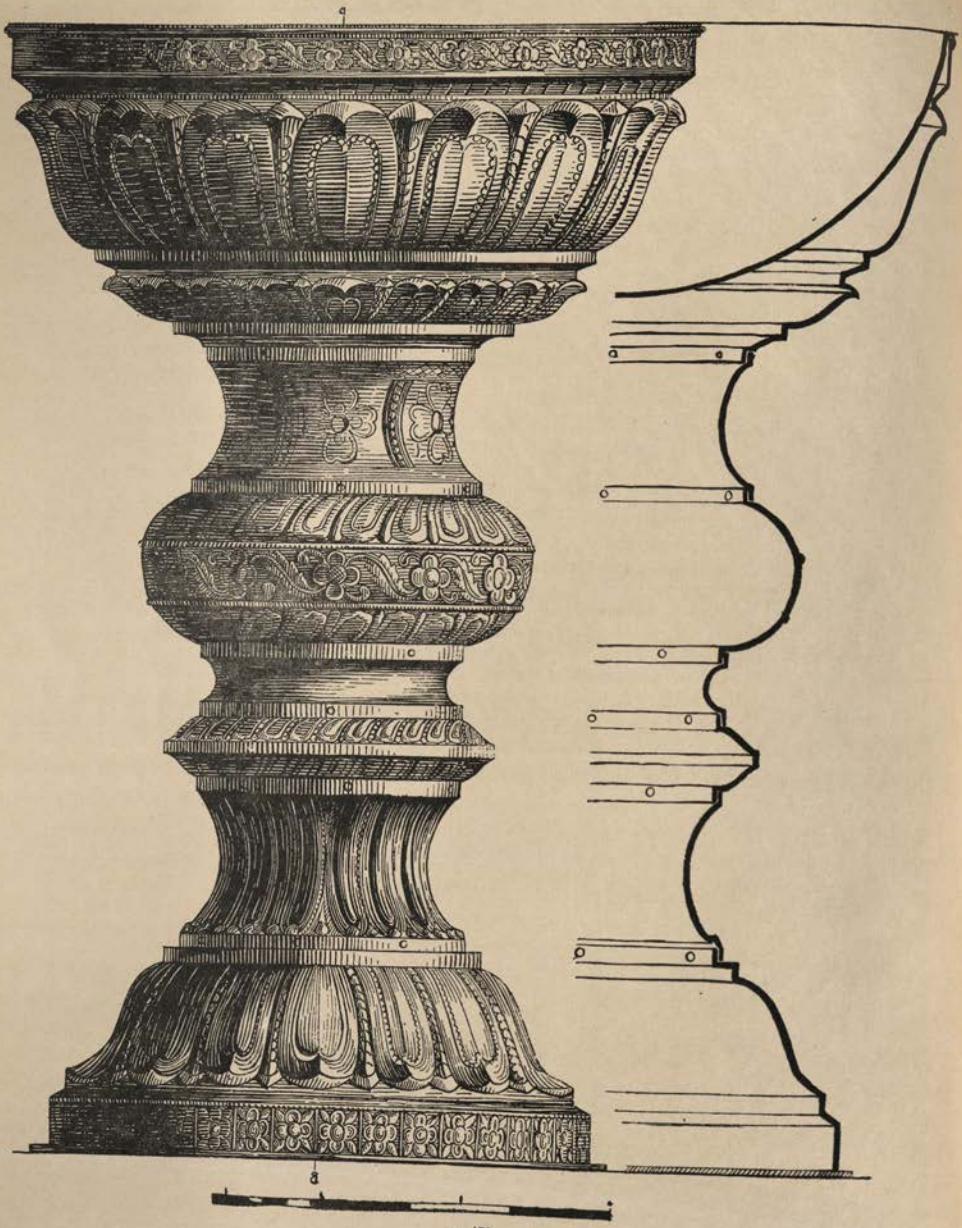


Fig. 171.

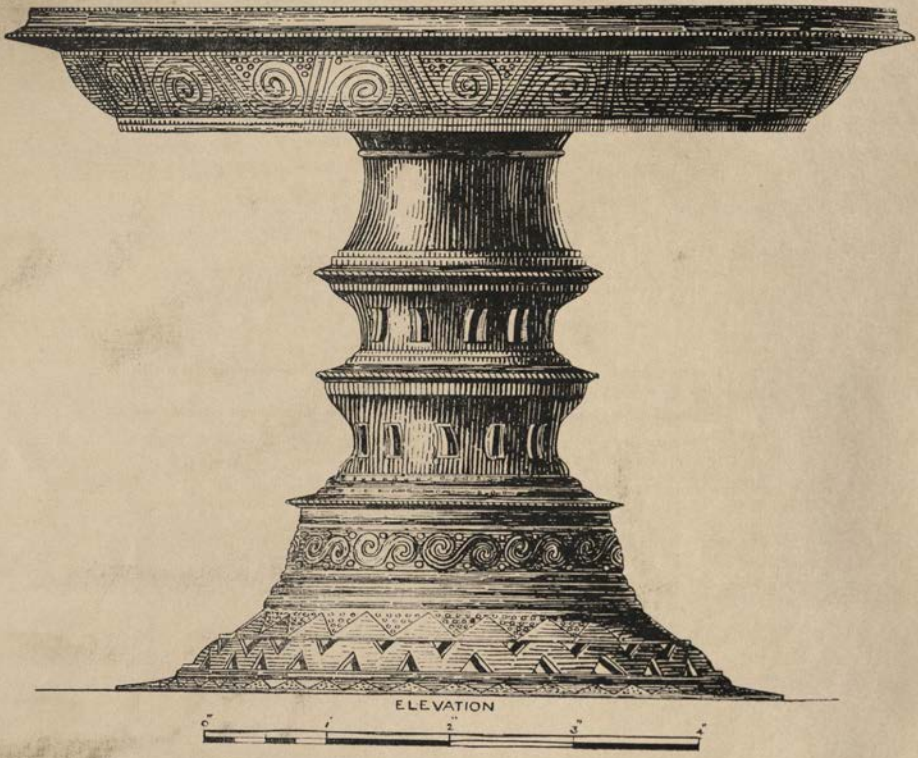
Fig. 171.

In this vase the construction and the workmanship is different from the preceding examples.

The sectional drawing shews that it is made in eight sections rivetted together.

As in figure 168, the proportions are not good, the stem being too large for the base and top.

It is in the Government Museum.



172.

Fig. 172.

This flat brass tray on a stand is used either for betel-leaves or covered with a plantain leaf for eating purposes.

The decoration consists of a series of mouldings, some with simple spirals, and some plain.

It is in the Government Museum.

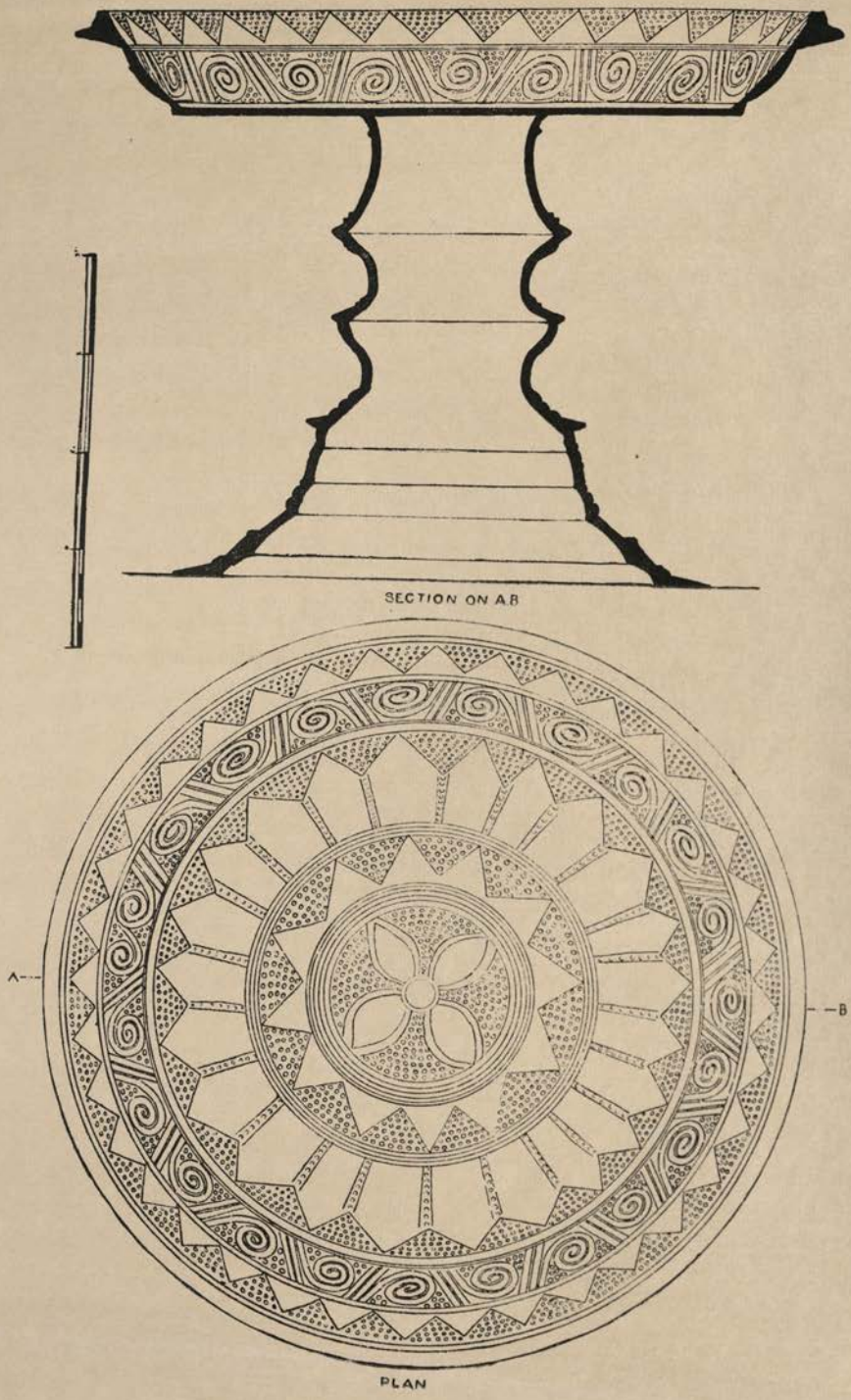
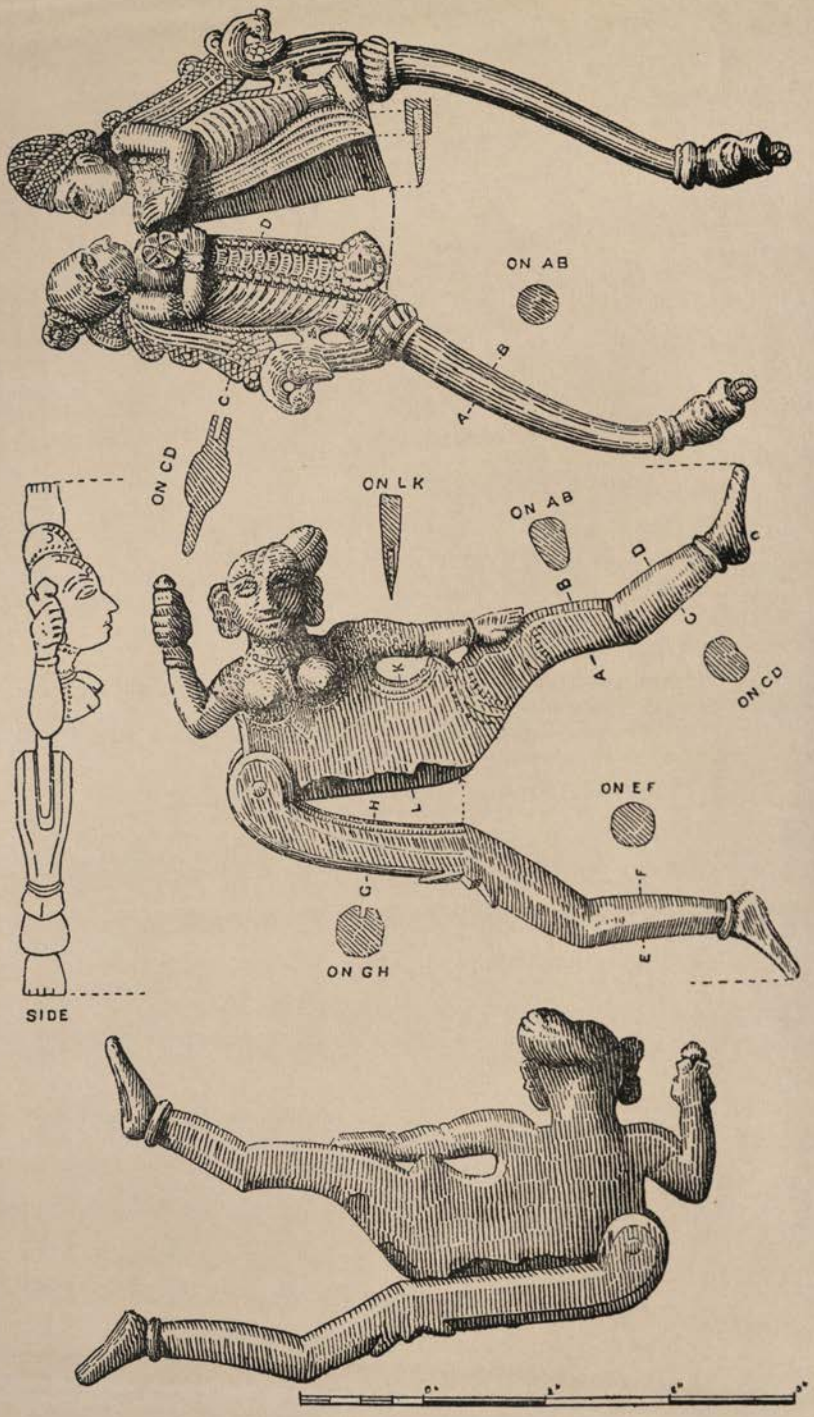


Fig. 172 a.

Fig. 172-A.

The drawing shews the plan of the top, and the section, of the preceding tray.



Figs. 173 & 174.

Figs. 173 & 174.

The following four plates of illustrations of areca-nut slicers, from the Government Museum, shew the main forms which these useful articles assume.

They are constructed generally of brass, with a steel cutting blade, and are often ingenious and curious in pattern.

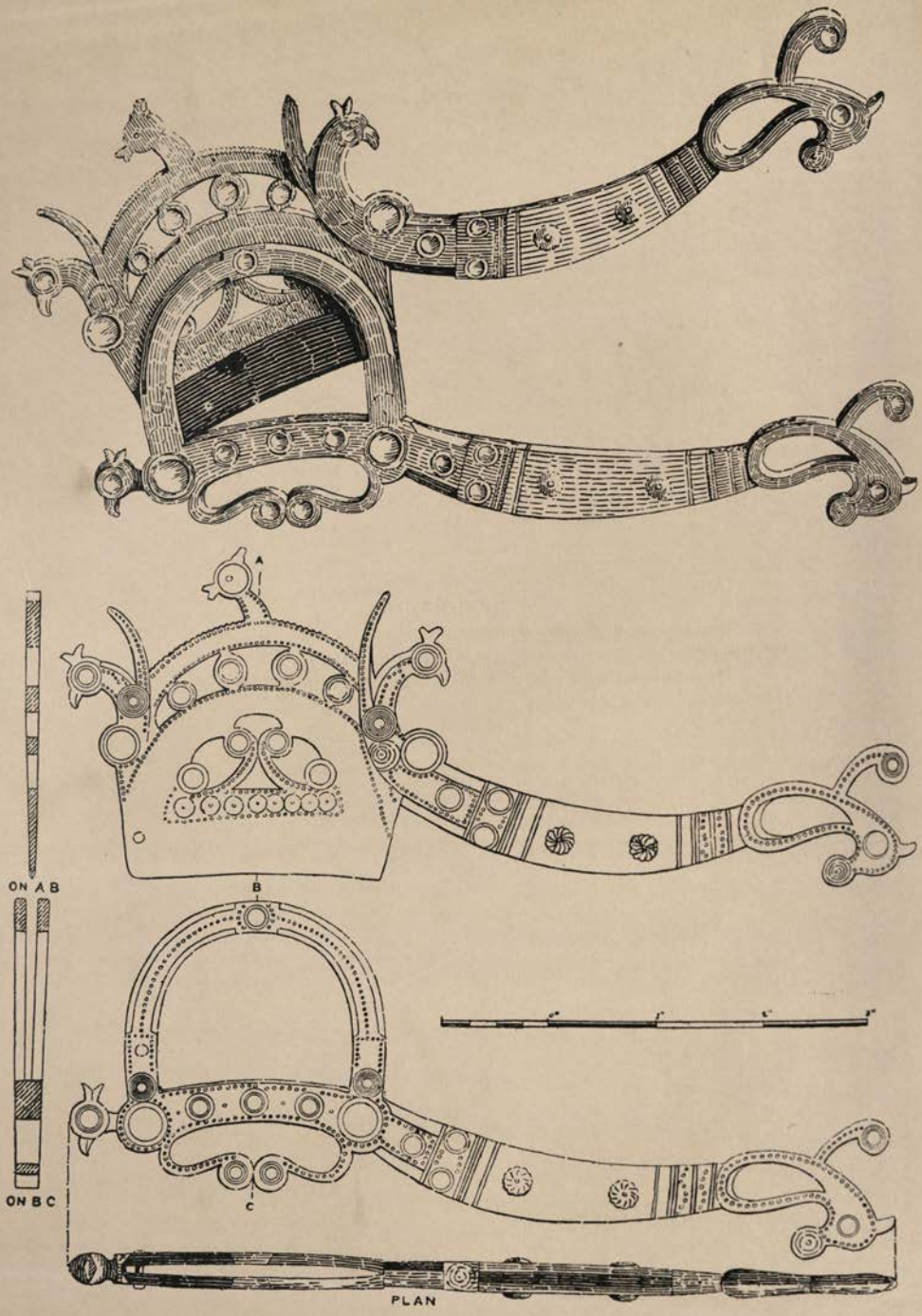


Fig. 175.

Fig. 175.

This areca-nut slicer is of a more modern pattern than the ones figured in the previous plate.

The handles in this specimen have plates of ivory or bone, attached.

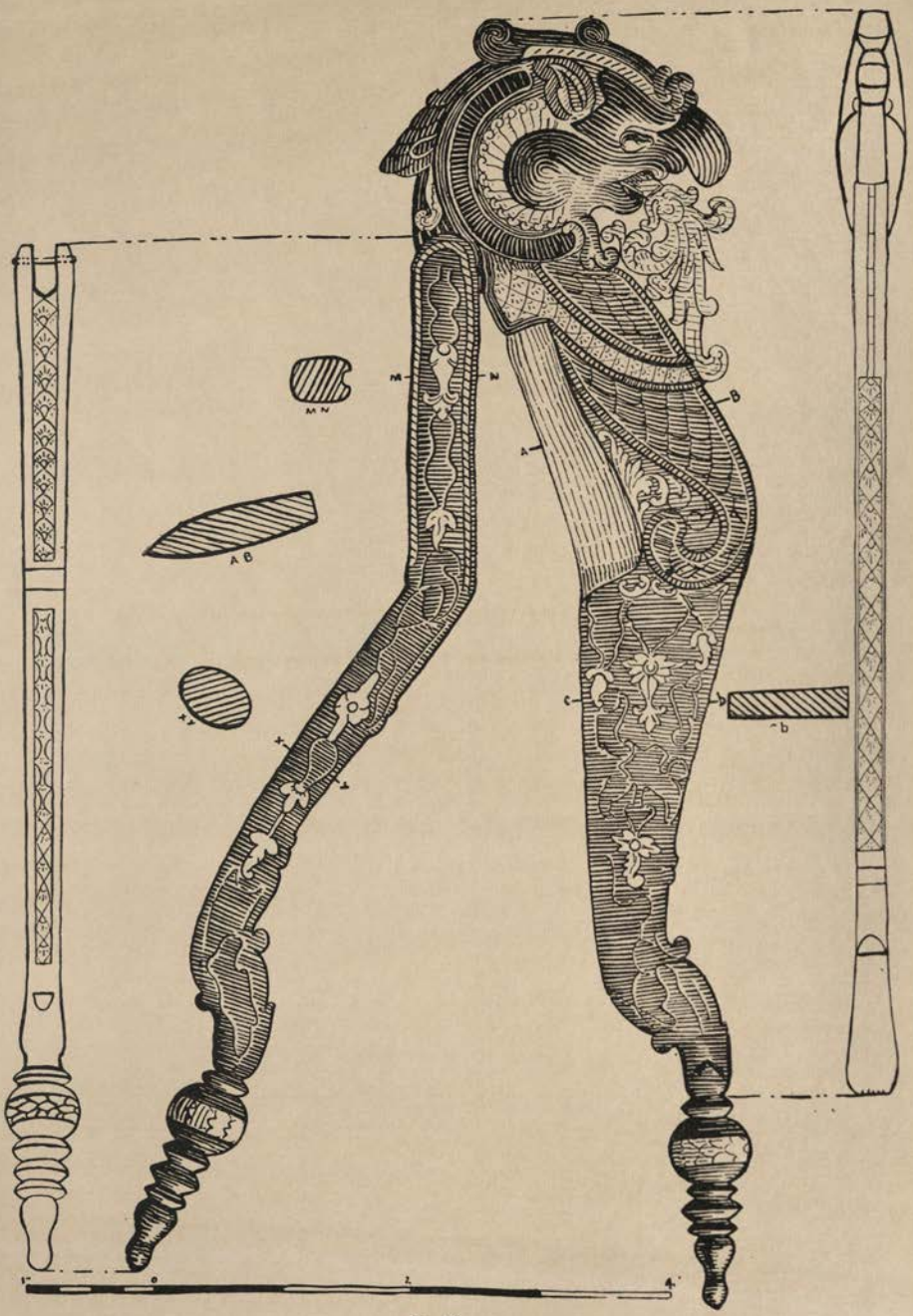
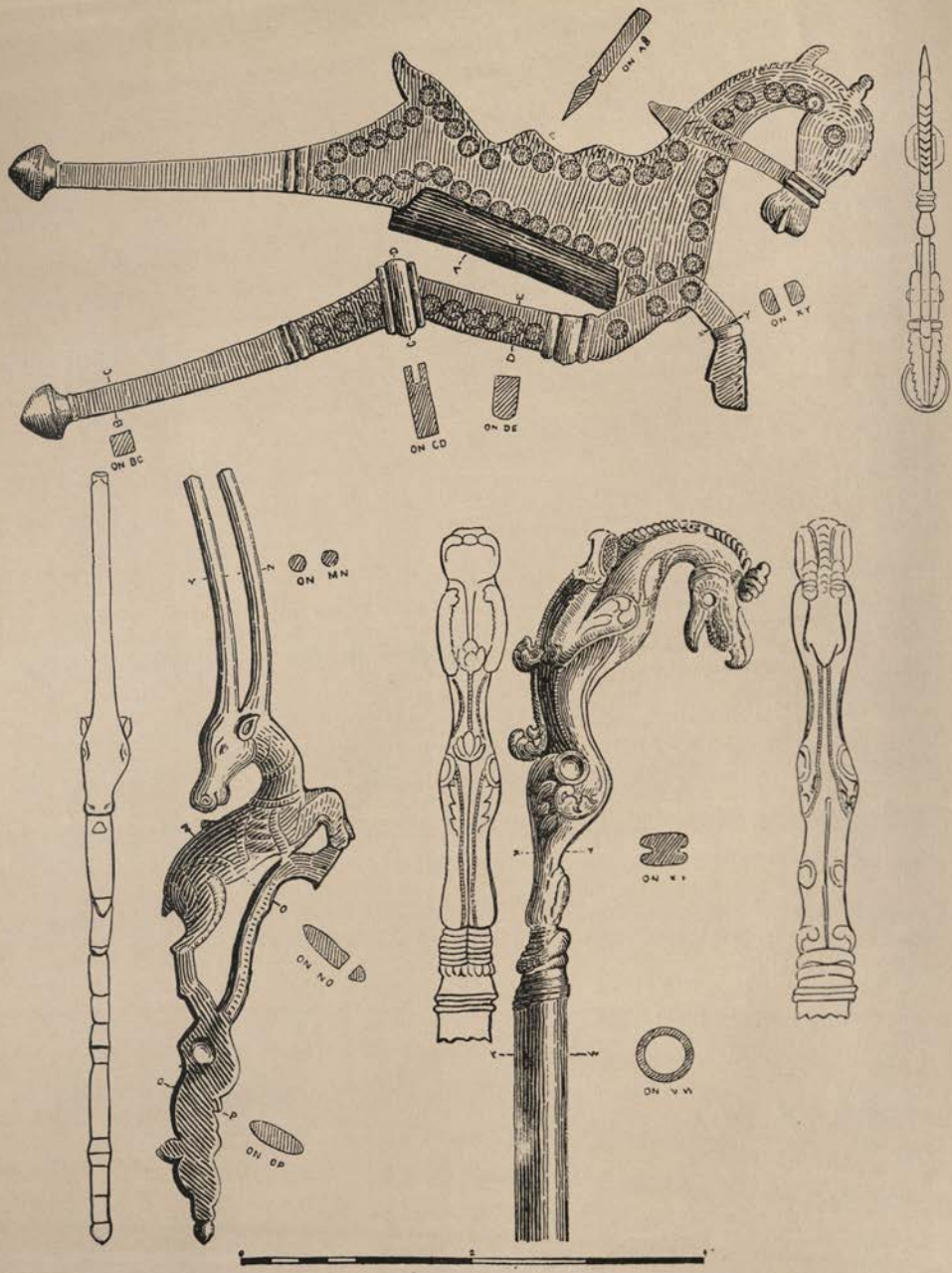


Fig 176

Fig. 176.

This drawing shews a favourite and typical form of nut slicer common in Ceylon, where it is called "giraya".

The form represents the head and body of "Serapendiya" with the wings and feathers indicated.



Figs 177 & 178.

Figs. 177 & 178.

The upper drawing in this plate is of a nut slicer in the form of a horse. Of the two lower drawings, the one of an antelope is probably a Siva symbol, and the other, of a lion, is intended for the head of a stick.

Both are of brass and are in the Government Museum.

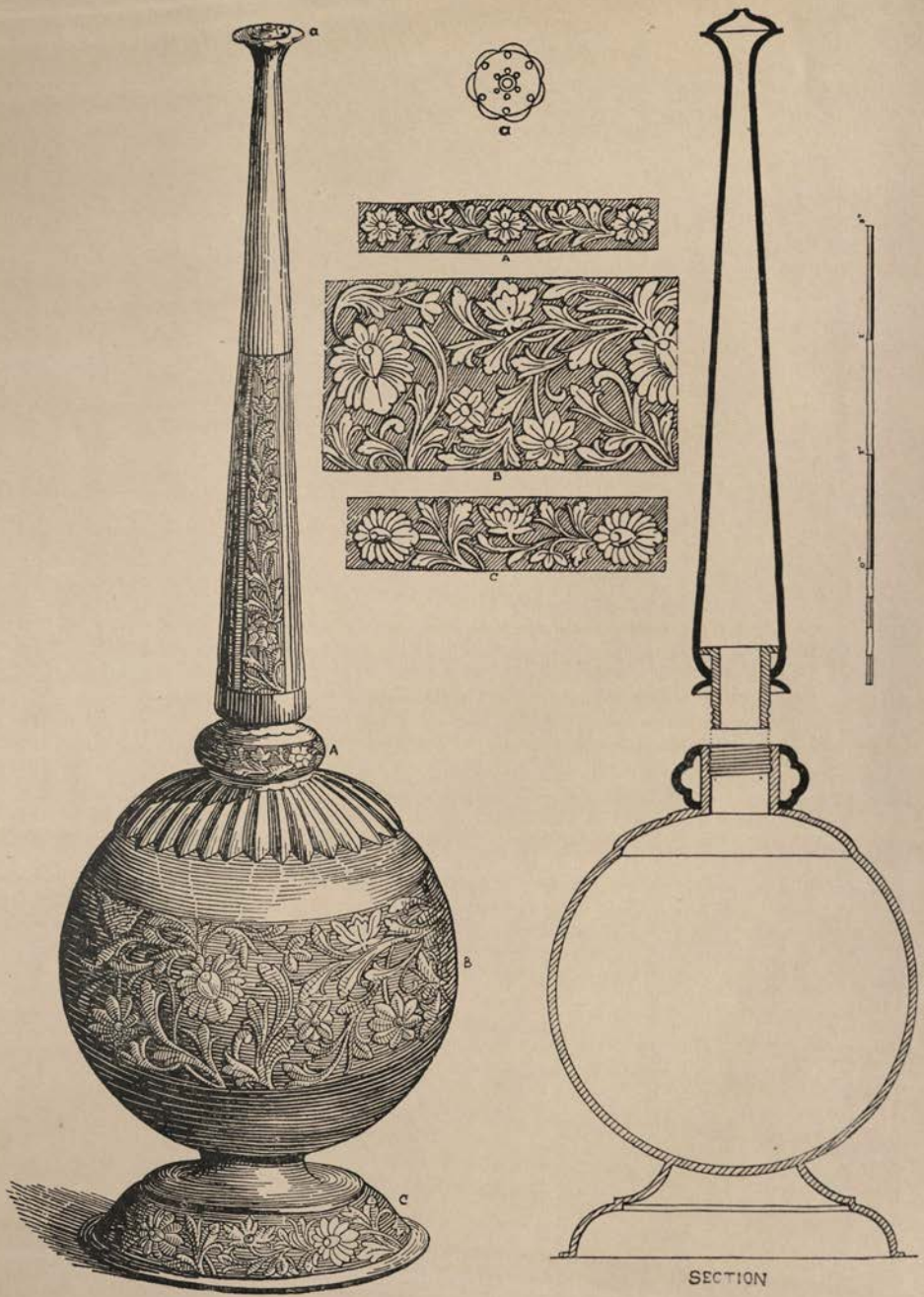


Fig. 179.

Fig. 179.

This rose-water sprinkler of copper, silver plated, is not a very fine specimen.

It is somewhat seldom the case for these common articles to be fashioned well if made of an inferior metal.

Great elaboration and very fine workmanship is more often displayed on silver and gold examples.

It is in the Government Museum.

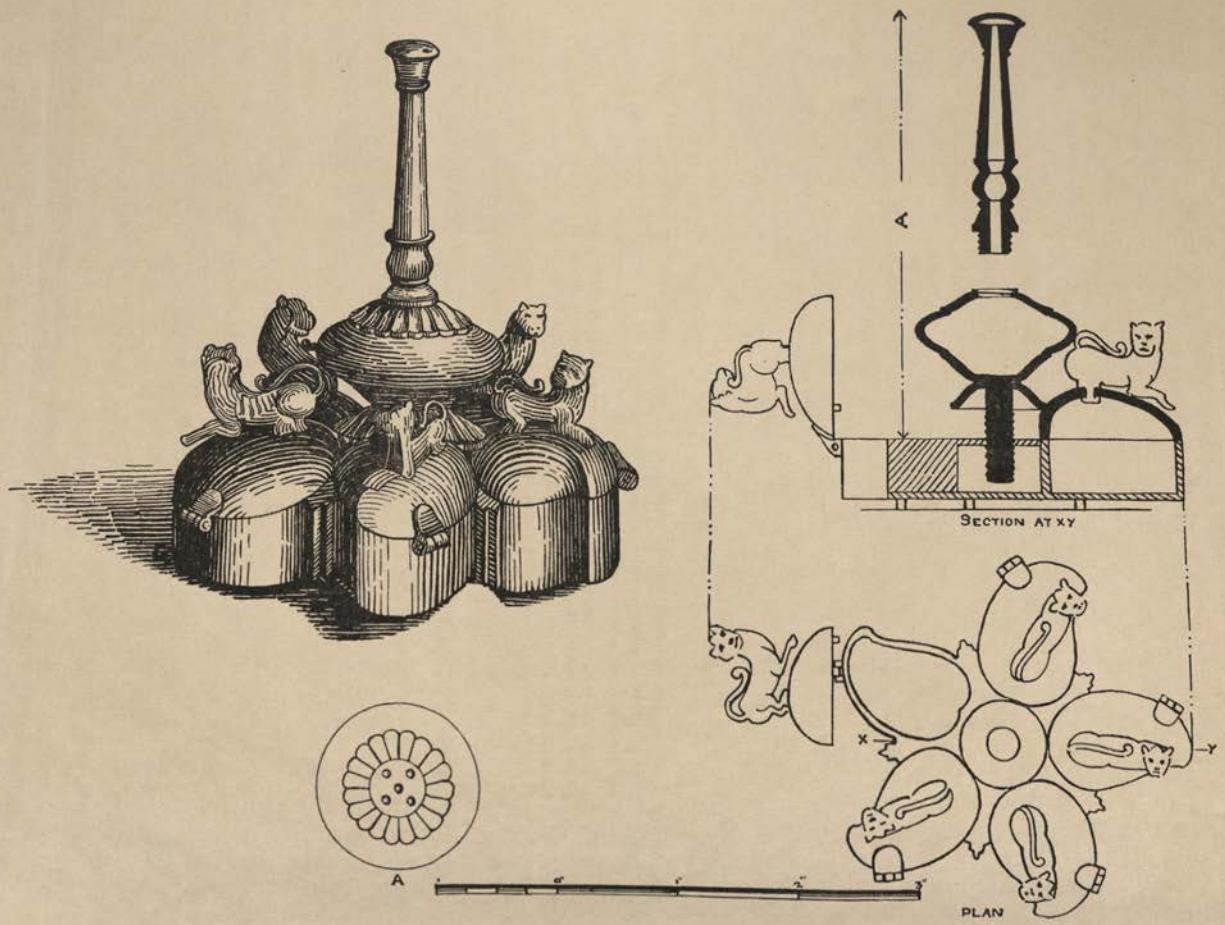


Fig. 180

Fig. 180.

The common form of spice box shown in this figure is capable of great variety of detail and ornamentation.

The section and plan shew the construction.

There are five mango-shaped receptacles for various spices, each covered with a hinged lid on which rests a lion, and when all these lids are closed, the central portion which is intended for rose-water, screws down and keeps all the lids in place.

The specimen is in the Government Museum.

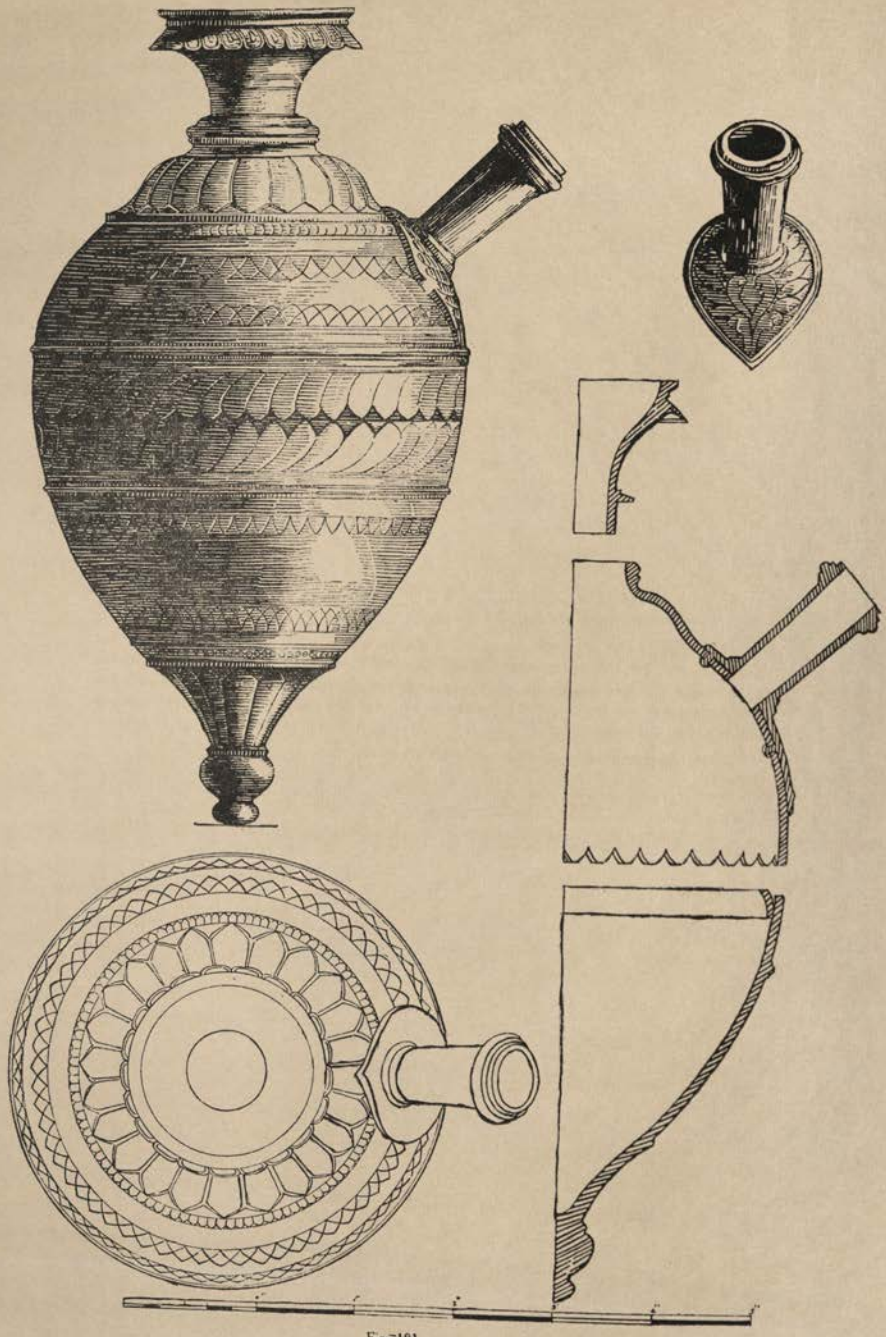


Fig. 181.

Fig. 181.

The drawing is of the base of a hookah or water pipe.

These may be seen occasionally in use by Mussalmans in Southern India, but are not in such universal use as in the North, where hundreds may be seen in every bazaar, and it is a very common occurrence to see persons walking through the bazaar inhale a few whiffs of smoke from any handy pipe, the pipes in many shops being almost common property.

The specimen is in the Government Museum.

Fig. 182.

Fig. 182.

This bell-shaped hookah base is of more frequent occurrence than the preceding cocoanut-shaped example.

This specimen, which is in the Government Museum, is decorated with a group of devadasis. It is of brass.

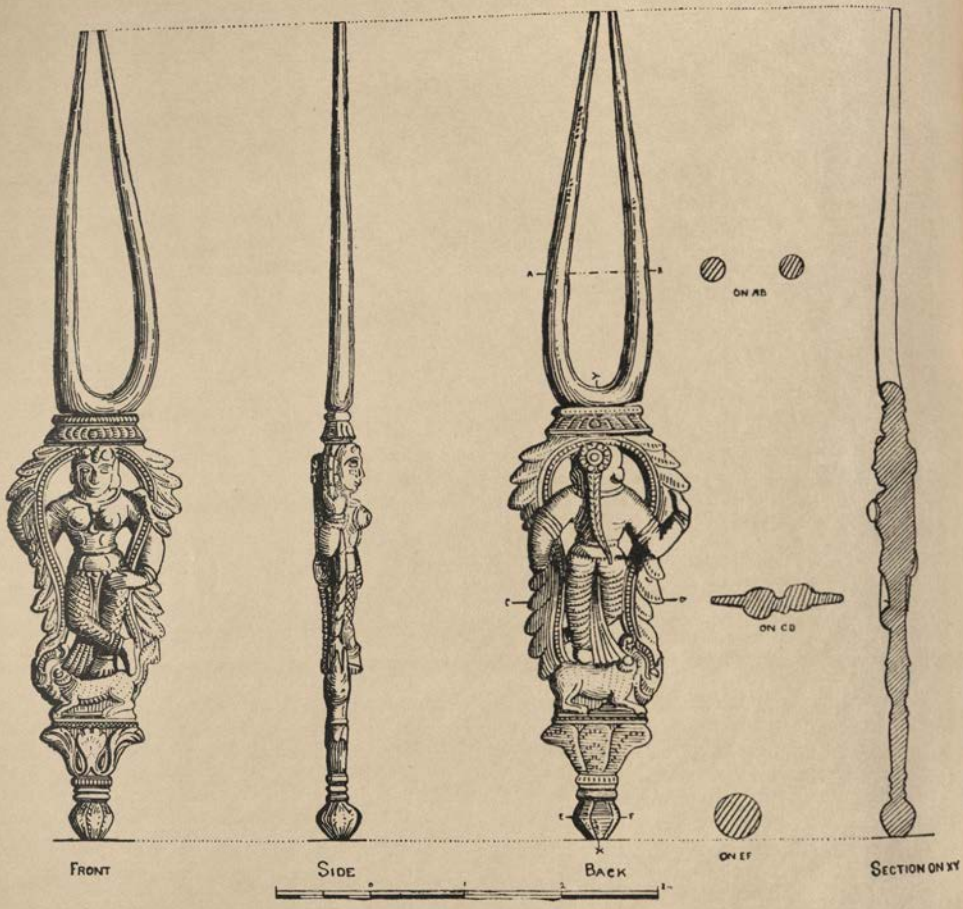


Fig. 183.

Fig. 183.

The hair comb here illustrated is of a common form. It is of brass and is in the Government Museum.

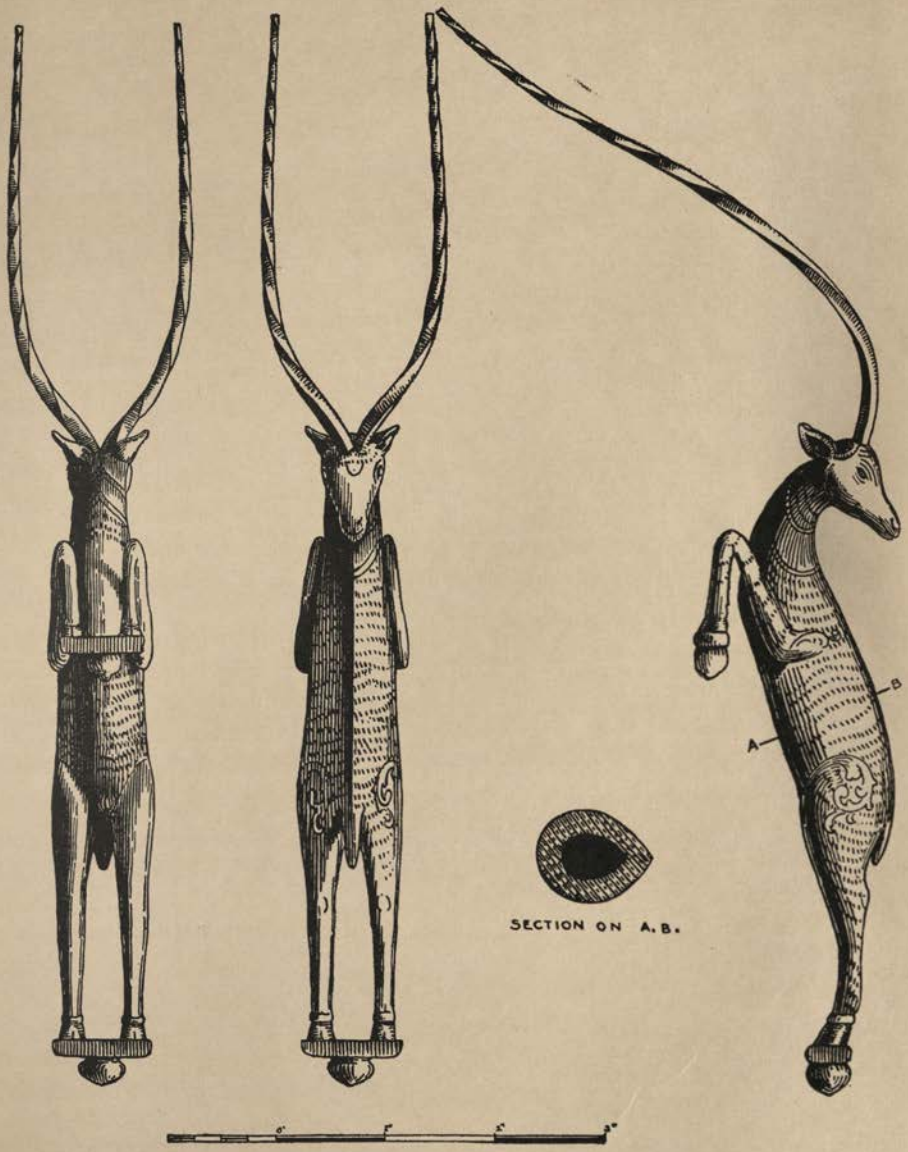


Fig. 184.

Fig. 184.

The antelope, the symbol of Siva here shewn, is of brass.

While there is no mistaking the maker's intention, the anatomy of the beast is not without its faults.

It is in the Government Museum.

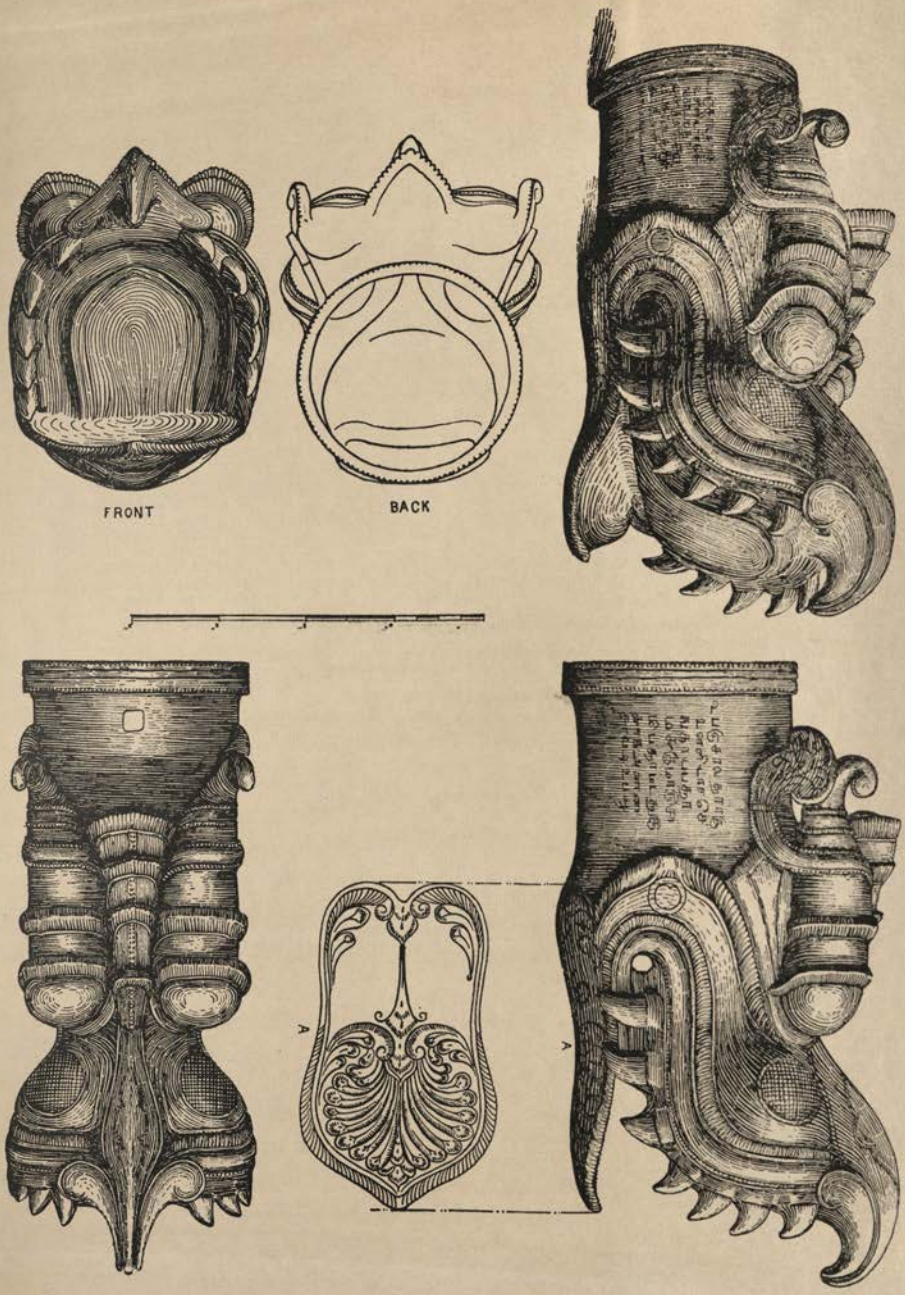


Fig. 185.

Fig. 185.

This lion's head, from the School of Arts, of brass, is intended for the end of a palanquin or kavadi pole.

It is a common form, but a particularly good specimen.

The inscription in Tamil is to the following effect :—

"With the help of Ganapathy; this swan-like kavadi is the gift to the temple of Coomaraswami Pather, son of Sengaya Pather, who is a member of one of the five divisions of artisans."

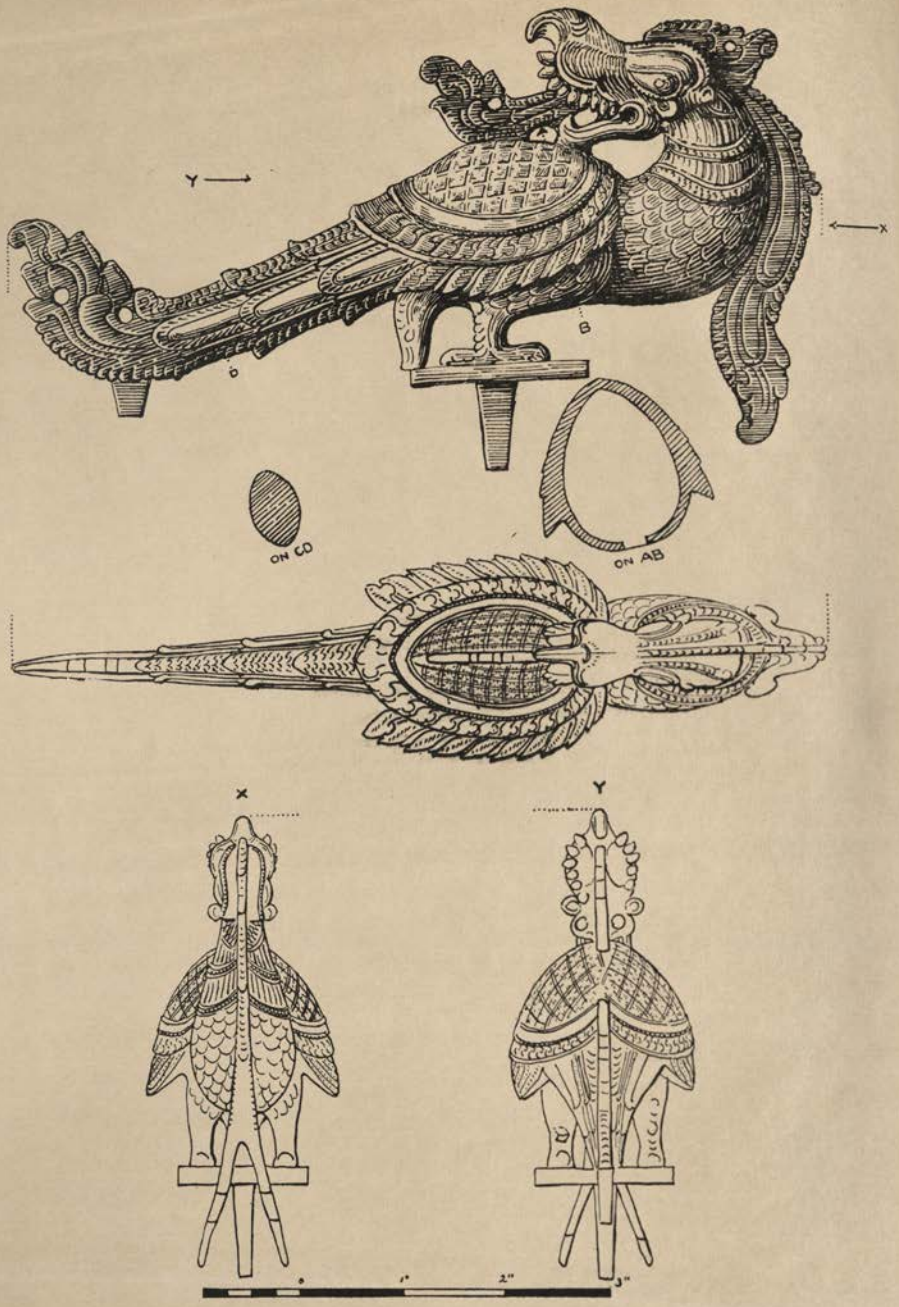


Fig. 186.

Fig. 186.

This bird form, with the head of a lion, is of copper, heavily gilt. It once formed a part of some metal ornament in the temple at Madura.

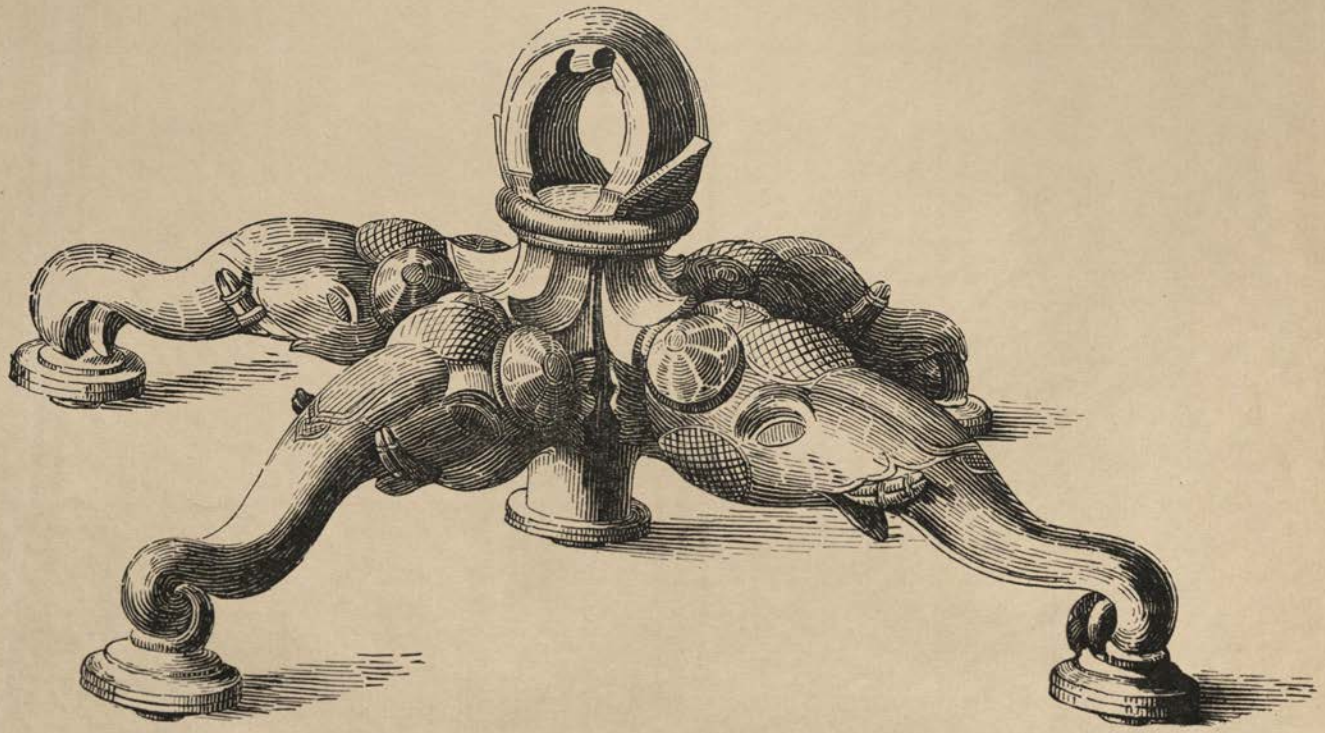


Fig. 187.

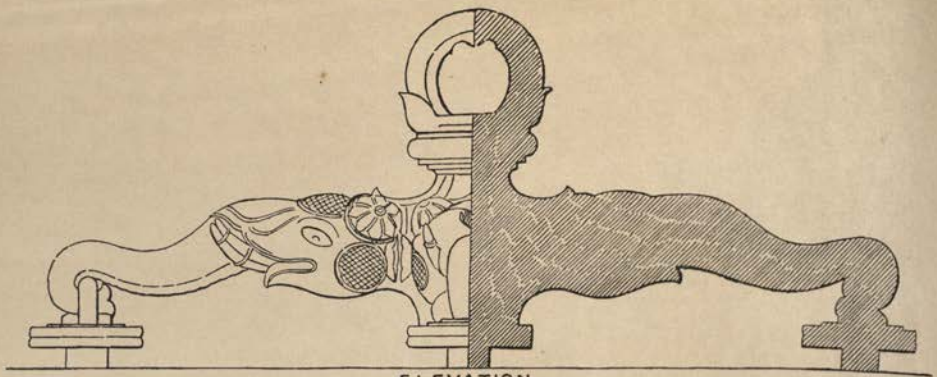
Fig. 187.

The exact use of the article here illustrated is somewhat problematical.

It may have been intended to support the ribbons or streamers used in the kolattum dance, as a very similar arrangement is frequently met with used for this purpose.

If this is the case, there were, probably, originally a ring at the end of each elephant's trunk, from which the ribbon depended, and the large central ring at the top would be attached to the ceiling.

It is of brass and is in the Government Museum.



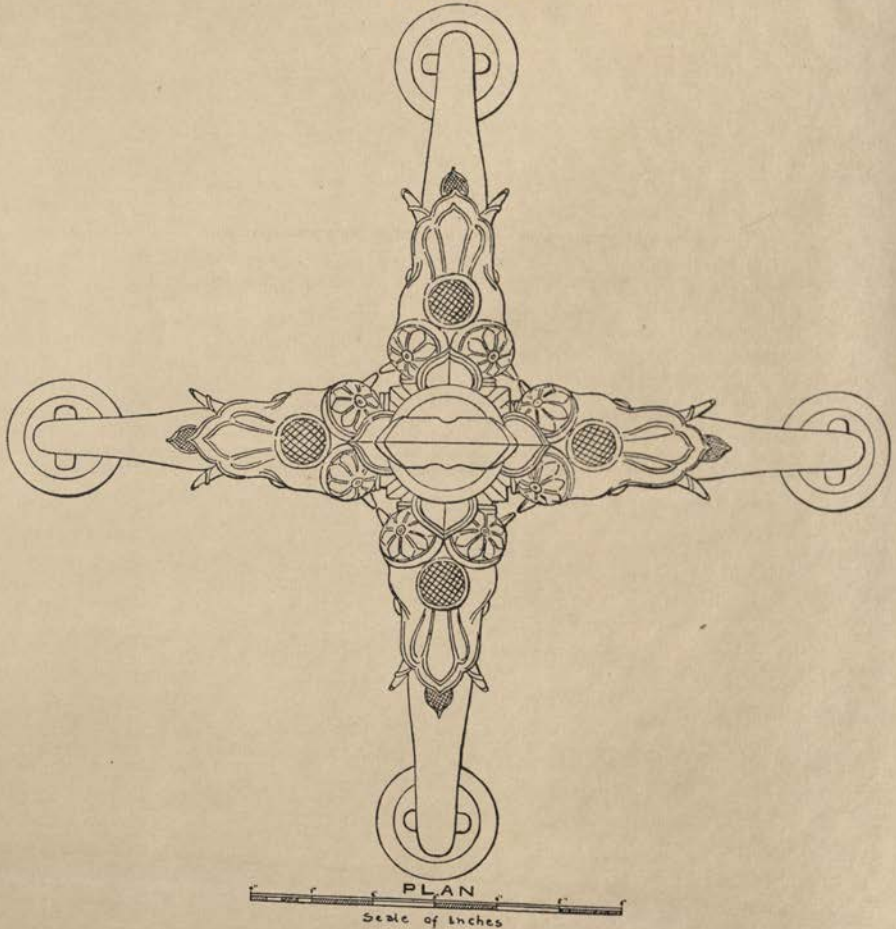


Fig. 187-A.

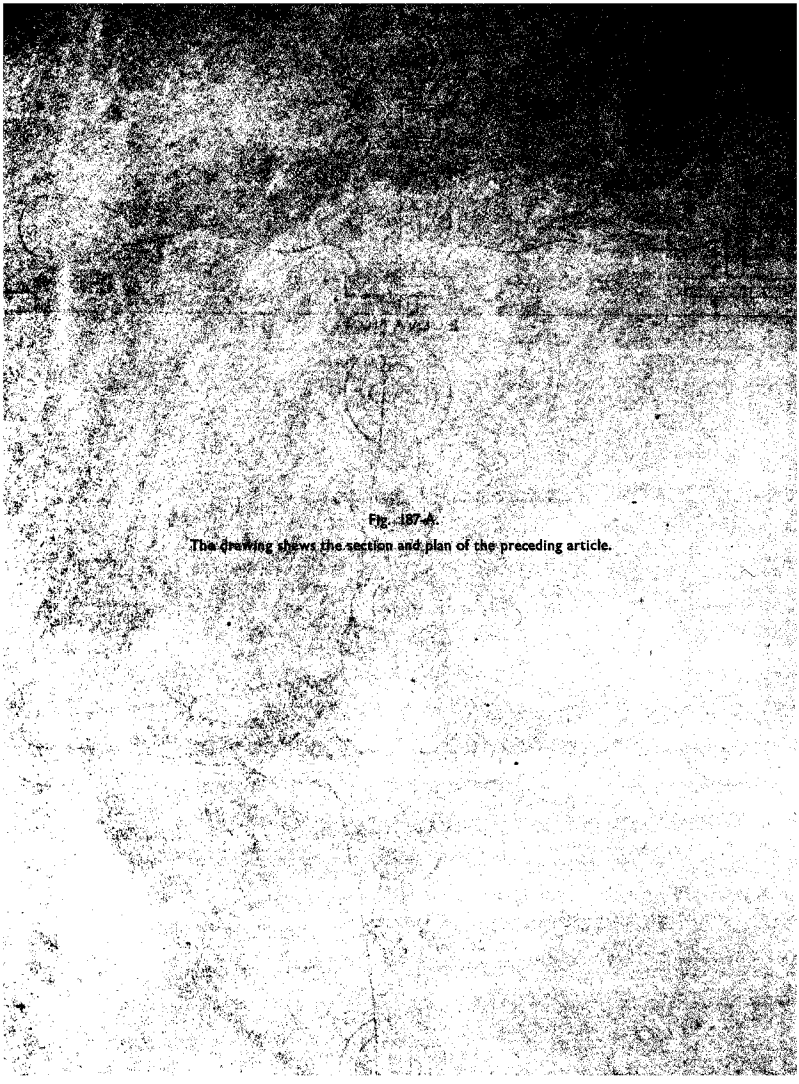


Fig. 187-A.

The drawing shews the section and plan of the preceding article.

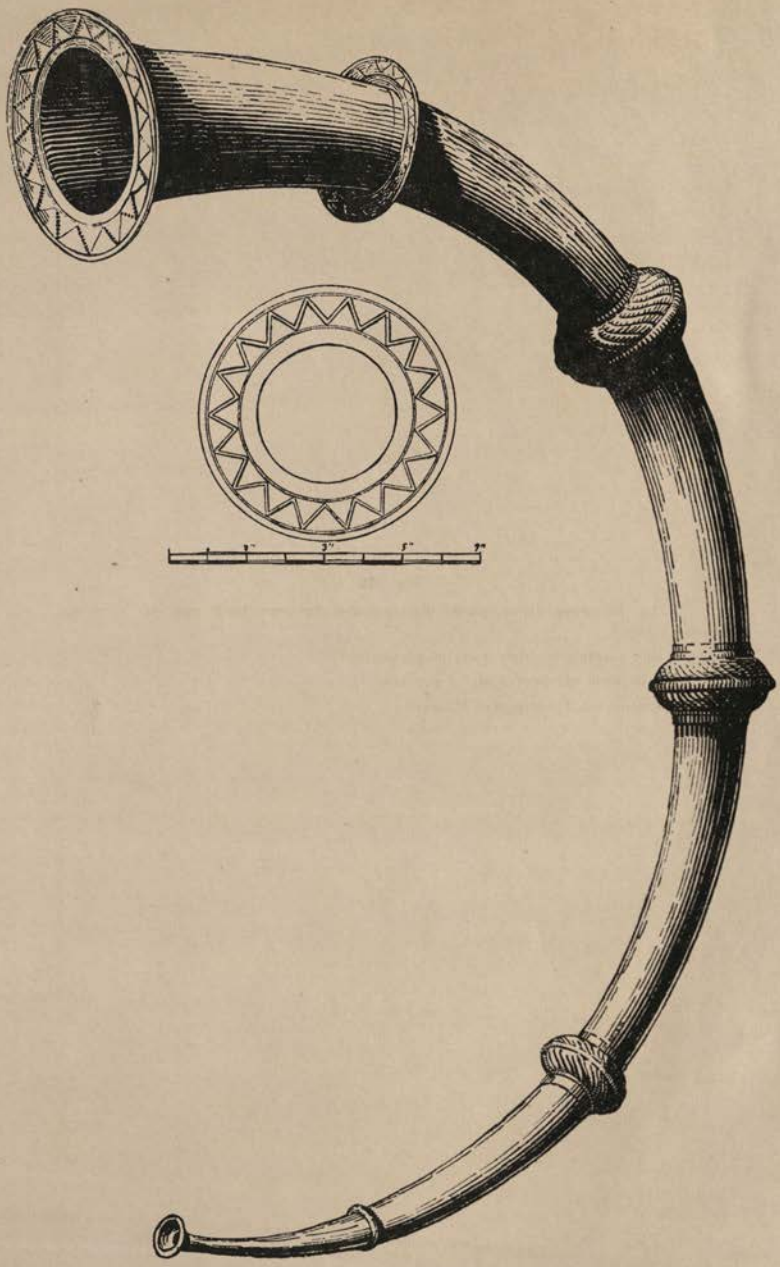


Fig. 188.

Fig. 188.

The following three plates illustrate the common horn used at numerous Hindu festivals.

This example is fairly good in proportion.

It is made of sheet brass in sections.

It is in the Government Museum.

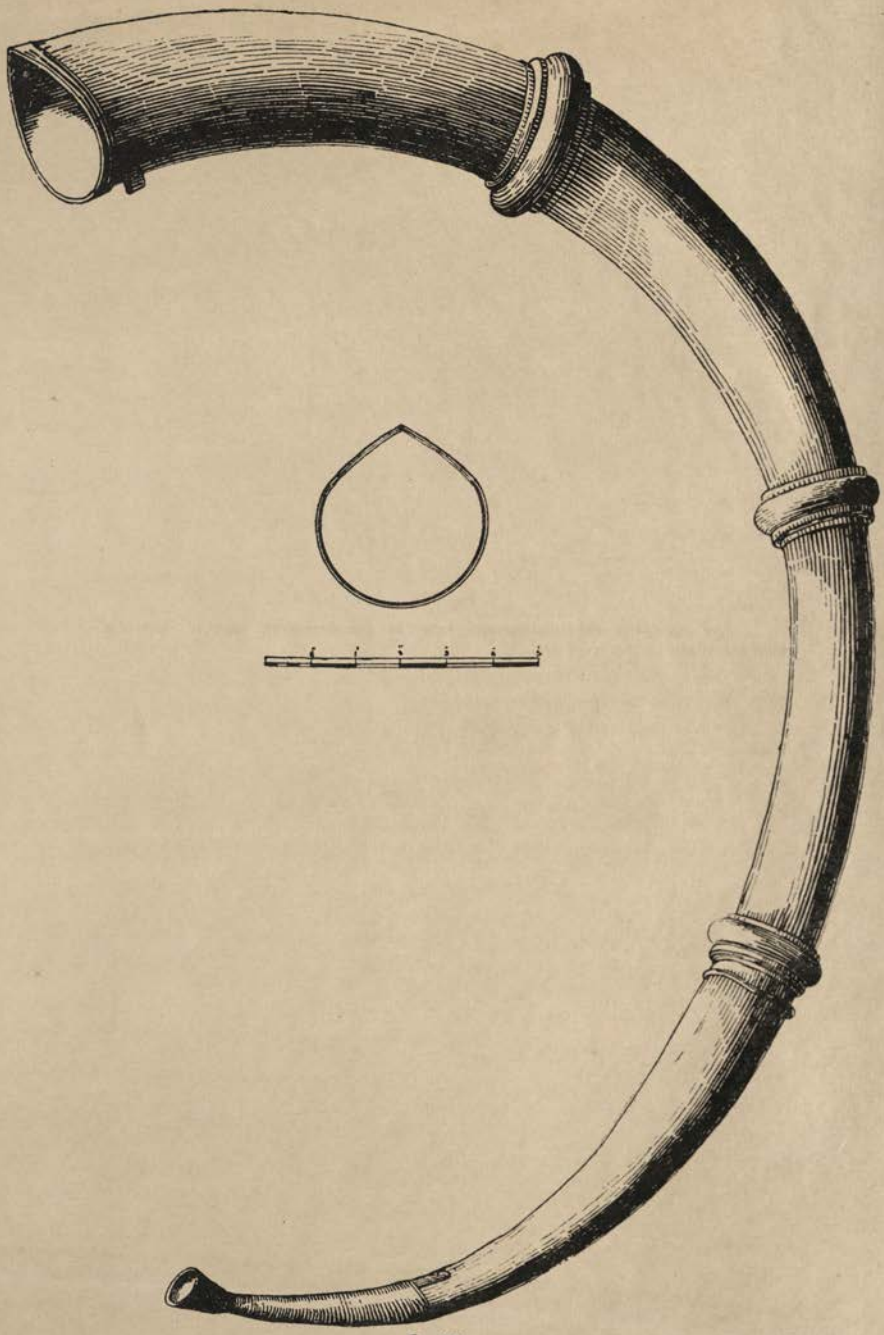


Fig. 189.

Fig. 189.

This horn is of the same general form as the preceding example, but of a different shape at the large end.

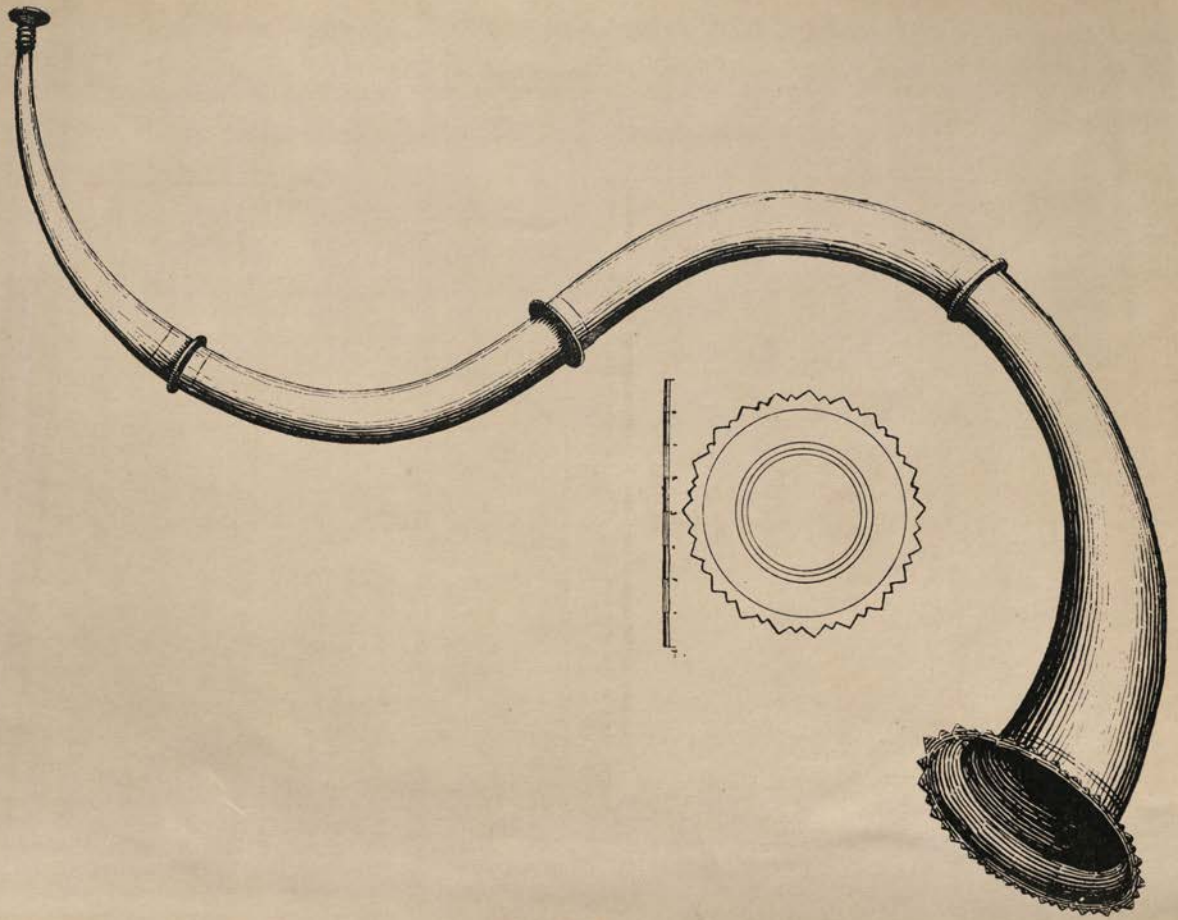


Fig. 190.

Fig. 190.

This horn in the shape of the letter S, is also a common form. Still another shape, like that of a trombone, only without a movable part, is a more modern pattern.

It is of sheet brass and is in the Government Museum.

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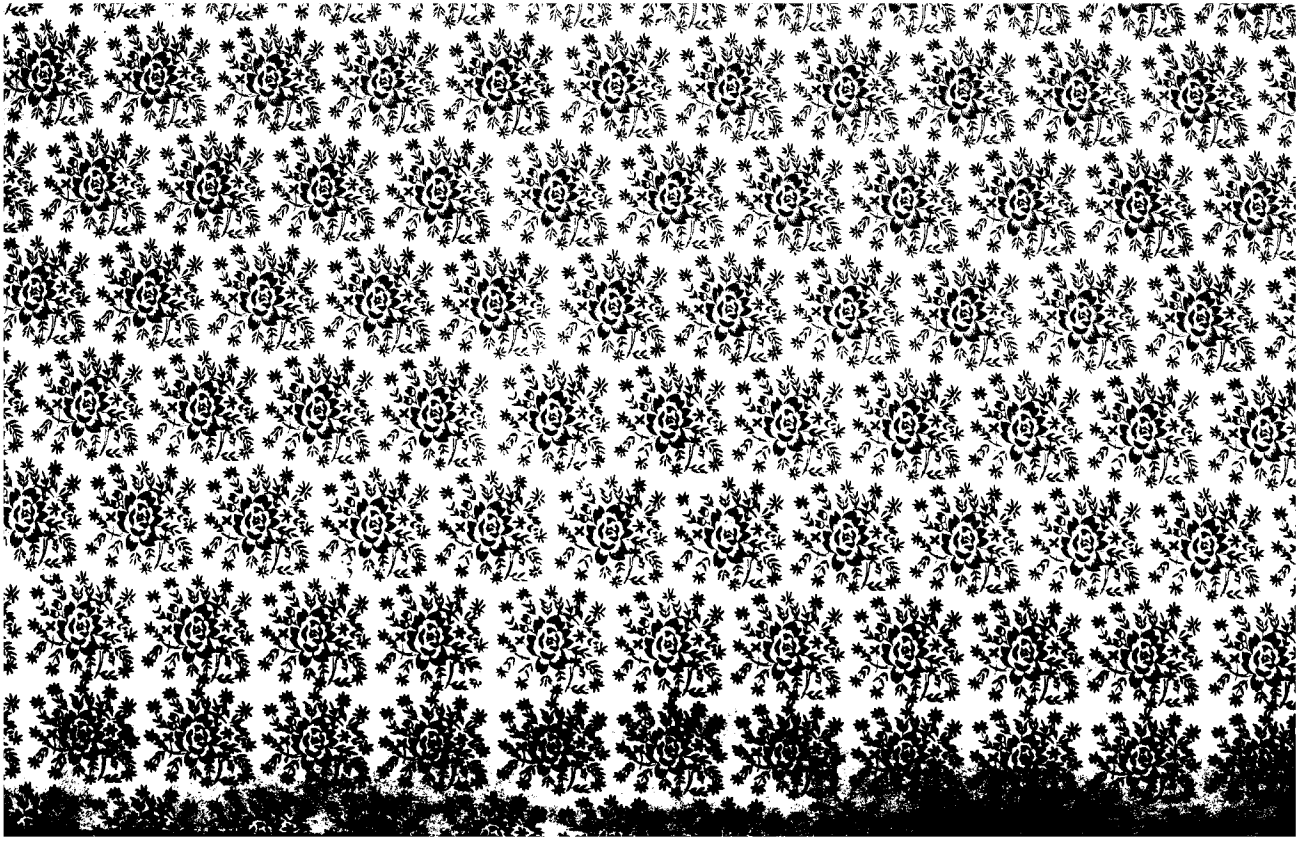
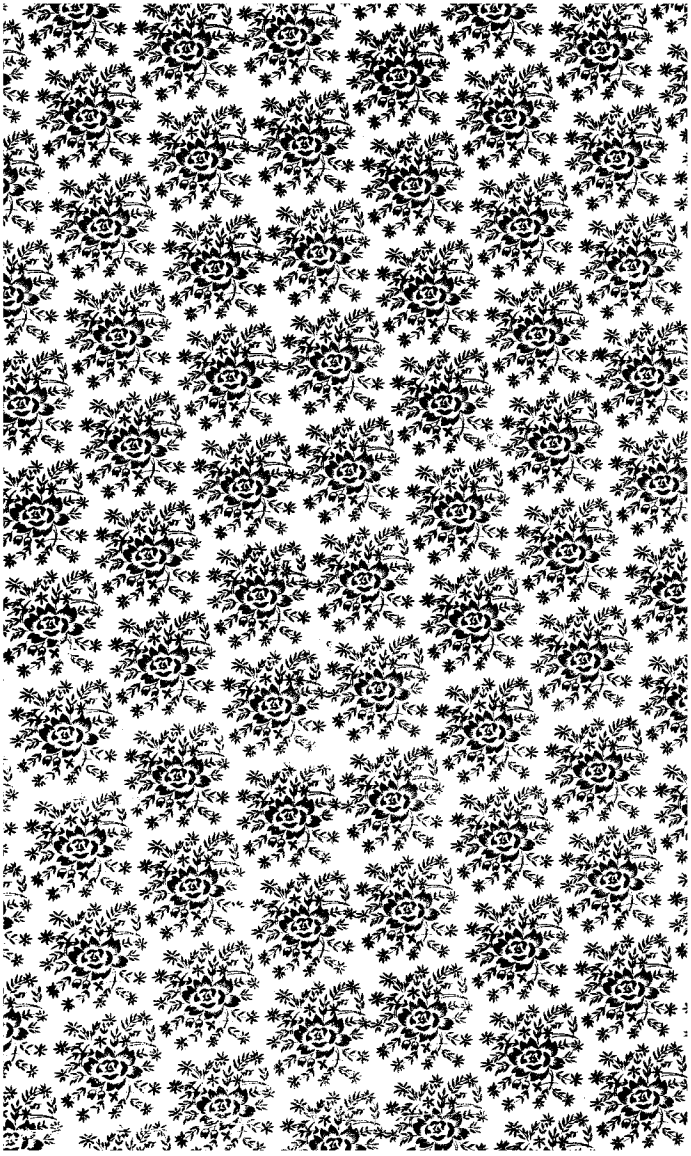
ERRATA

Page No.	Line	For	Read
4	35	54 etc. examples	54 etc. are examples
5	37	Swedan	Sweden
12	50	a wooden with thin core metal	a wooden core with thin metal
29	14	other	ether
31	15	made	make
67	5	tiney	tiny
203	6	this is	that is
289	4	breasts any eyes	breasts and eyes
323	3	sun a crescent	sun and crescent
381	4	botom	bottom





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